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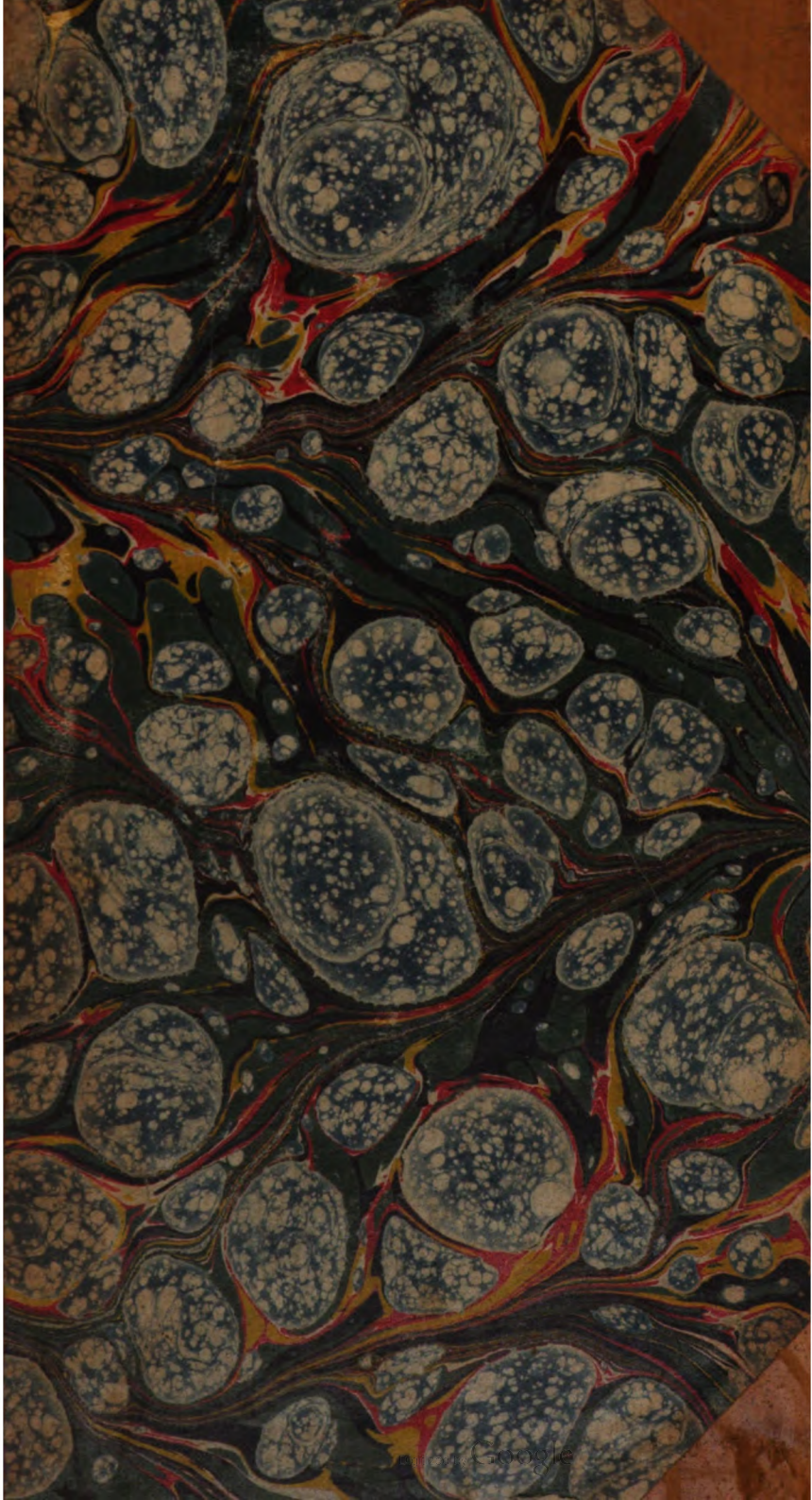
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THE
LONDON MEDICAL
R E P O S I T O R Y
AND
R E V I E W.

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CONTENTS

OF

VOLUME III.—NEW SERIES.

PART I.

REVIEW.

| | PAGE |
|---|------|
| 1. The Regimen of Infants | 1 |
| 2. Anatomy of the Fœtal Brain | 15 |
| 3. Transactions of the Edinburgh Medico-Chirurgical Society | 32 |
| 4. Of Diet | 89 |
| 5. Of the Diseases of Infants | 111 |
| 6. Of the Diseases of the Eye | 126 |
| 7. Of the Extirpation of Diseased Ovaria | 135 |
| 8. Dr. Struve's Artificial Mineral Waters | 146 |
| 9. Of Venous Circulation and Absorption | 185 |
| 10. Of Headaches | 192 |
| 11. Of the Diseases of Infants (Second Article) | 201 |
| 12. On Hydrocephalus Acutus | 215 |
| 13. Dr. Cubitt's Essay on Bathing | 222 |
| 14. Of Constitutional Irritation | 281 |
| 15. Practice of Physic in the Reign of James I. | 297 |
| 16. Of the Principles of Dental Surgery | 317 |
| 17. State of the Medical Profession | 331 |
| 18. Researches on Digestion | 377 |
| 19. Uses of Anatomy and Physiology | 393 |
| 20. On the State of Medical Feeling | 398 |
| 21. Of Fever | 409 |
| 22. Life of Dr. Bateman | 465 |
| 23. On the Pathology of Melanosis | 479 |
| 24. On Diphtheritis | 489 |
| 25. Chirurgia parva Laufranci | 508 |

*PART II.*COLLECTION OF MEDICAL FACTS, WITH
OBSERVATIONS.

SECTION I.—ORIGINAL PAPERS.

| | PAGE |
|--|------|
| 1. An Attempt to prove that the Heart is the sole Power concerned in the Circulation of the Blood. By FREDERICK BAILEY, M.B., &c. | 49 |
| 2. Of the Use of Blisters in certain Chronic Eruptions of the Skin. By EDWARD THOMPSON, Whitehaven..... | 57 |
| 3. Case of Neuralgia cured by Acupuncturation. By J. H. EWING, M.D. | 225 |
| 4. Case of Presentation of the Placenta Fatal at Seven Months of Utero Gestation. By W. JAMES, M.R.C.S., &c. .. | 226 |
| 5. On the Illiberal Resolution of the Board of Trustees of the Hunterian Museum | 228 |
| 6. On the Distinction between Rheumatism and Inflammation. By WILLIAM SHEARMAN, M.D., &c..... | 340 |
| 7. On Strangulated Hernia | 344 |
| 8. Extensive Injury of the Abdomen by the Goring of a Bull. By WILLIAM DIX, Surgeon, &c. | 347 |
| 9. Reflections on Dr. Barry's Theory of Venous Circulation. By F. BAILEY, M.B., &c..... | 519 |
| 10. State of the Profession | 522 |

SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND
FOREIGN, WITH REMARKS.

| | |
|---|-----|
| 1. Employment of Sulphuric Æther in Hernia | 59 |
| 2. Tumour which occupied the situation of the Coccyx— Note of | 60 |
| 3. Of the Modus Operandi of Poisons | 61 |
| 4. Of the bad Effects of Carious Teeth..... | 62 |
| 5. Of Absorption—Use of Cupping Glasses, &c..... | 63 |
| 6. Aneurism of the Aorta | ib. |
| 7. Functions of the different parts of the Brain in Fish | 64 |
| 8. Cicatrization of Wounds of the Brain | 65 |
| 9. Acupuncture in Suspended Animation | 66 |
| 10. An Account of the Pinta, or Blue-stain, a singular Cutaneous Disease..... | 67 |
| 11. Inguinal Aneurism—Case of, &c..... | 69 |
| 12. Recovery from Abscess of the Brain | 70 |
| 13. Sub-acute Inflammation of the Uterus—Case of | ib. |

| | PAGE |
|---|------|
| 14. Two Canals of a peculiar kind in the Vagina and Uterus— Discovery of | 73 |
| 15. On the Anatomy of Old People | 75 |
| 16. External Application of Medicines | 76 |
| 17. On the Diet best adapted for Persons labouring under Tabes Mesenterica..... | ib. |
| 18. Of the Diet of Pulmonary Invalids | 77 |
| 19. Morbid Anatomy—The Uterus wanting | ib. |
| 20. Of the Preparation of Extracts. By J. HOULTON, Esq., F.L.S., &c. | 78 |
| 21. Local Self-Combustion—Case of | 79 |
| 22. Remarks on the Human Stomach | 80 |
| 23. Treatment of Chilblains with the Chloride of Lime | 83 |
| 24. Use of Pyroligneous Acid in Sphacelus—Case of | ib. |
| 25. Case of Rheumatism of the Heart, cured by Acupuncture .. | 154 |
| 26. New Doctrine of Temperaments | 156 |
| 27. On the Use of Camphor in Acute and Chronic Rheuma- tism | 158 |
| 28. Ergot of Rye | 159 |
| 29. The Mad Village | 160 |
| 30. Stricture of the Urethra | ib. |
| 31. Antidote to Prussic Acid | 161 |
| 32. Aneurism of the Aorta | ib. |
| 33. Inguinal Hernia of the Right Side | 163 |
| 34. Dislocation of the Vertebral Column, followed by Recovery .. | 164 |
| 35. On the Secretion of Bile | 165 |
| 36. Scheme for Investigating the Causes, Nature, and Seat of Indigestion | 166 |
| 37. Inflammation of the Cerebral Veins | 167 |
| 38. Action of Poisons on Plants | 169 |
| 39. Poisoning with Arsenic, Cases of | 171 |
| 40. Scientific Institutions—London University | 229 |
| 41. Poisoning with Arsenic—Cases of (continued) | 234 |
| 42. Experiments on the Action of the Heart | 248 |
| 43. Remarks on the Secale Cornutum | 255 |
| 44. On the Inflammation of the Blood-vessels which occurs in Variola | 259 |
| 45. Disease of the Spinal Marrow—Case of | 263 |
| 46. Case of Polyphagia | 265 |
| 47. Digestion | 267 |
| 48. Essential Oil of Male Fern | 269 |
| 49. Digitalis | ib. |
| 50. Aneurism from a Wound | 270 |
| 51. Lumbago and Sciatica cured by Moxa—Case of..... | 272 |
| 52. Peculiar Catarrhal Complaint in Children—Observa- tions on | 273 |
| 53. Notice of Eight Calculi arrested in their Progress through the Urethra | 348 |
| 54. Observations upon a Case of Chronic Dyspnœa | 350 |

| | PAGE |
|--|------|
| 55. Upon the Treatment of Syphilis without Mercury | 353 |
| 56. Poisoning with Arsenic—Cases of (concluded) | 358 |
| 57. Extirpation of an Ovarium—Successful Case of | 416 |
| 58. Functions of the Spleen | 422 |
| 59. Case of Cyanosis | 424 |
| 60. Dr. Spurzheim's Letter concerning the Case of Miss Dunlop | 425 |
| 61. Chemical Notice of a Black Liquid vomited in a Cancerous Disease of the Stomach | 430 |
| 62. Chemical Examination of a Liquid found in the Gall Blad- der of a Man who died with a Scirrhus Affection of the Pancreas | 434 |
| 63. Treatment of Continued Fever | 435 |
| 64. Case of Poisoning by Nitric Acid | 438 |
| 65. Case of Poisoning from Hyssop Tea | 439 |
| 66. Case of Wound of the Heart | ib. |
| 67. Sitzings of the Royal Academy of Medicine at Paris | 440 |
| 68. Rewards for Scientific Labours | 442 |
| 69. The Thymus Gland | ib. |
| 70. On the Constitution of the Albinos | 443 |
| 71. Interstitial Pregnancy | 444 |
| 72. Hæmorrhage from the Ovarium | ib. |
| 73. Efficacy of Nux. Vomica in Dysentery | 445 |
| 74. Experiments on the Process of Digestion | ib. |
| 75. Case of a Lady born Blind, who received Sight by the Formation of an Artificial Pupil | 526 |
| 76. Upon the Treatment of Syphilis without Mercury (con- cluded) | 532 |
| 77. Circulation in the Spleen | 536 |
| 78. Examination of the Body of the celebrated Talma | ib. |
| 79. Sulphate of Quinine administered by Frictions | 537 |
| 80. Application and Management of Blisters | ib. |
| 81. Rupture of the Aorta | 538 |
| 82. Extract from the Clinical Report of M. Bally's Cases at La Pitié | ib. |
| 83. Amputation of the Neck of the Uterus | 541 |
| 84. Case of Ovarian Dropsy | ib. |
| 85. Observations on a Case of Ruptured Tendo-Achillis | 542 |

SECTION III.—INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

| | |
|--|-----|
| 1. State of the Sick Poor | 83 |
| 2. New Mode of Percussion | 85 |
| 3. Hufeland on the Radix Caineæ, as a new Remedy against Dropsy | ib. |
| 4. Diseases of Artisans | ib. |
| 5. Sulphate of Quinine | 86 |

| | PAGE |
|---|------|
| 6. Laennec on Diseases of the Thoracic Viscera | 86 |
| 7. Clinical Report of the Diseases most prevalent during June | ib. |
| 8. Vaccination | 175 |
| 9. Singular Mode of Syphilitic Infection | ib. |
| 10. Spina Bifida | 176 |
| 11. Encephalitis | ib. |
| 12. Congenital Obliteration of the Canal of the Intestines.... | ib. |
| 13. Aneurisms | ib. |
| 14. Mental Disorders | 177 |
| 15. Moxas | ib. |
| 16. On the Presence of Iodine in Mineral Waters..... | ib. |
| 17. Meeting of the Associated General Medical and Surgical Practitioners of England and Wales—Report of..... | 178 |
| 18. On the Qualifications of Medical Officers in the Army .. | 180 |
| 19. Clinical Report of the Diseases most prevalent during July .. | 182 |
| 20. Farming of Parish Poor | 274 |
| 21. New Division of the Thermometer | 275 |
| 22. Extirpation of an Ovarium | 276 |
| 23. Clinical Report of the Diseases most prevalent during August | ib. |
| 24. Farming the Sick Poor | 369 |
| 25. Royal College of Surgeons—By-Law, &c. of | 371 |
| 26. Poisoning from Putrid Food | 372 |
| 27. Journal Complémentaire du Dictionnaire des Sciences Médicales | 374 |
| 28. Clinical Report of the Diseases most prevalent during September..... | ib. |
| 29. Morbid Anatomy | 448 |
| 30. Report upon a Memoir of M. Balard respecting a New Substance | 450 |
| 31. Académie Royale de Médecine..... | 451 |
| 32. Medical Jurisprudence | 454 |
| 33. Acetate of Morphia—Tests of | 455 |
| 34. Analysis of the Tartar of the Teeth | ib. |
| 35. Pathology of Gout..... | ib. |
| 36. Case of Precocious Puberty | 456 |
| 37. On the Employment of Koumiiis | ib. |
| 38. Lithontriptic Instruments | 457 |
| 39. Platina | ib. |
| 40. Vaccination | ib. |
| 41. On the Extract of the Indigenous Poppy | ib. |
| 42. Death of Dr. John Barclay | ib. |
| 43. Death of M. Laennec | 458 |
| 44. Warm Springs of Bourbonne-les-Bains | ib. |
| 45. Ripa upon the Plague | 459 |
| 46. Bite of the Viper | 460 |
| 47. Medical Benevolent Society | ib. |
| 48. Ascent of the Spider | 462 |

| | PAGE |
|--|------|
| 49. Clinical Report of the Diseases most prevalent during October | 462 |
| 50. Notice of a New Mode of Adulterating Sulphate of Quinine | 545 |
| 51. Sitzings of the Royal Institute of France | ib. |
| 52. Biographical Notice of the late M. Laennec | 547 |
| 53. Membranous Angina | 551 |
| 54. Medical Jurisprudence | 552 |
| 55. Appointment of Chaplain to Lancashire Lunatic Asylum .. | 553 |
| 56. Stammering | 556 |
| 57. List of New Officers of the College of Physicians | ib. |
| 58. Clinical Report of the most prevalent Diseases during November | 557 |

MONTHLY MEDICAL AND SCIENTIFIC BIBLIOGRAPHY.

| | |
|--|-----------------------------|
| Literary Intelligence | 87, 183 |
| Monthly Record of Works received for Review, 87, 183, 277, 375, 463, 557 | |
| Meteorological Journal for London .. | 88, 184, 280, 376, 464, 564 |
| Notice of Lectures | 183 |
| Quarterly Report of Prices of Substances employed in Pharmacy, 278, 562 | |
| Bibliographical Notice | 375 |
| Notices to Correspondents | 464, 564 |

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VOL. XXVI.

No. XIII.—NEW SERIES.—VOL. III.

PART I. REVIEW.

I.

OF THE REGIMEN OF INFANTS.

Instructions to Mothers and Nurses on the Management of Children in Health and in Disease. By JAMES KENNEDY, M.D. London, 1825.

Commentaries on Diseases of the Stomach and Bowels of Children. By ROBLEY DUNGLISSON, M.D. London, 1824.

Practical Observations on the Convulsions of Infants. By JOHN NORTH, Surgeon Accoucheur. London, 1826.

Commentaries on some of the most important Diseases of Children. By JOHN CLARKE, Esq., M.D. London, 1815.

An Epitome of the Diseases incident to Children. By WILLIAM HEBERDEN, M.D., F.R.S., etc. London, 1817.

Traité des Maladies des Enfants jusqu' à la Puberté. Par J. CAPURON, Docteur en Médecine, etc. Paris, 1820.

THE diseases of children have attracted in late years far more attention than they formerly did; and if no other advantage were derived to mankind from the practice of midwifery by physicians and surgeons, this circumstance would alone prove its advisableness. It signifies not that we may be told by some of those ultra delicate persons, whose external modesty is no assurance to us of their real purity, that the practice of midwifery and attention to infantile diseases may be separately pursued; for we shall appeal to the fact, that so long as midwives were employed, so long were infants entrusted to them for medical assistance, and so long did medical men neglect, because, indeed, they had no motive to attend to, the disorders of infancy. Even, however, under the stimulus thus given, and amidst the aids

VOL. III. NO. 13.—NEW SERIES.

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which many modern publications afford, this department of medicine is but little cultivated by the profession in general. We have had opportunities of seeing many really well-informed men deceived here, whose sagacity in the diagnosis of diseases that occur in later life is undoubted; and hope given or denied, with very little reason for either, where, indeed, the event proved the incorrectness, and where, as it appeared to us, a little attention was alone requisite for the attainment of accurate judgment. But, what is certainly still more inexcusable, there is a most unaccountable inattention in practice to the diet and the regimen of children, though without doubt the nurse has far more in her power than the physician, and may counteract or assist his endeavours to an extent, that, without due control, is truly lamentable. And that this control is rarely obtained, stands in need of no proof; but why it is not obtained seems seldom to have entered into the consideration of medical practitioners. Contented with blaming the obstinacy and ignorance of nurses, they think not that the faults of these attendants are mainly owing to ignorance in themselves: but partially acquainted with the habits of infancy, scarcely recognising those rapid and often minute changes in the countenance and actions of infants which indicate peculiar sufferings, they yield at once to the nurses in the perception of disease. Nor can it be expected that while the latter are sensible of their own superiority in one respect, that they will believe their own inferiority in another. They will not credit that he who cannot so readily recognise disease as themselves can more readily cure it. 'Knowledge is power,' is an old observation; and none is more true, nor more capable of useful application. Ignorance has always a certain diffidence of itself, and will for this very reason succumb to knowledge. It delights in support, while it dreads responsibility; but then it must be convinced of itself, and this can never be effected by another kind of ignorance. Yet such is, in truth, the practice with medical men. The nurses give them not credit for knowledge of any kind, because they know them to be ignorant in some most essential points; and we hesitate not to say, that the complaints respecting these assistants of the sick would be far more rare, were the attention of medical men more directed to those minute but essential points in which they are excelled by the nurses.

These remarks seem to us naturally to arise from the consideration of the subject which we shall now proceed to lay before our readers, viz. the regimen and the diseases of infancy; for as the physician can do actually nothing without the assistance of the nurse, the best means of procuring her

co-operation forms a most important problem. We believe that we have, in a great measure at least, solved it; but we are certain that the means we have recommended, if not sufficient, are at least essentially necessary, and that nothing can be done without them. Something must of course depend upon the disposition of this class of people; but with a perfect knowledge of what is required, it will be possible to direct and control, in some degree, even the worst disposed; while without it, the best disposed may go wrong, because they will have no confidence in their superintendent.

We now proceed to the more immediate subject of this article, viz. the regimen of infants; and first, as perhaps the most fruitful source of their diseases, we shall consider the circumstances connected with their food.

In the few remarks that have been made on the subject of new-born infants, by some of the older authors, they have been very careful to recommend various kinds of food, but principally combined with honey, as proper to be given before infants are put to the breast; and this custom is even now practised almost universally. Like every other error, however, it either depends upon, or has given rise to another. It is imagined by many practitioners, that milk is not secreted till towards the third day, and that to apply the infant earlier to the breast is only giving needless trouble to the mother. The fact, however, is not so; nor, if it were, would this be the legitimate inference. In many women, the breasts are actually distended in the course of twelve hours; and very seldom indeed does it happen that three whole days elapse before the secretion is fully established—that is, if it be established at all. Neither is the inference legitimate, if the fact were otherwise; for the very act of suction stimulates the discerning powers of the organ; and frequently have we seen the milk fully recalled to the gland, when it had begun to diminish, by repeatedly applying the infant to the nipple.

But farther, even were it true that milk is not immediately secreted, and that to apply the infant to the breast is useless, still it would not follow that any thing should be given to it in the interval; for we may certainly conclude that nature accommodates herself to circumstances, and that milk is not secreted, because it is not necessary for the child. But all this reasoning is rendered unnecessary by what we have stated to be the fact, viz. that milk is generally immediately secreted: and what is important, also, the first milk is always purgative, having, it may be concluded, this quality conferred upon it to evacuate the meconium, nor ought any thing to be given to the child till it receives this its first food from the

mother. Analogy from the lower creation likewise shews this most clearly, for the lamb applies its mouth to the teat the instant it is dropped; nor with any animal does more than an hour or two elapse before they begin to suck. In man, also, the first action of the child's mouth is suction; and it seizes with avidity the finger presented to it. What can, therefore, be more unnatural than the pouring gross mixtures with a teaspoon down the throat by the nurse, which is so constantly done.

Dr. Kennedy has mentioned four or five hours as the time when the infant should be first put to the breast. We are inclined to believe, however, that in the great majority of cases this is late enough; and we should rather lay it down as a rule, that the child should be permitted to suckle so soon as the mother has overcome the first hurry and fatigue of parturition. This time will of course considerably vary in different women; but it seems a far more rational and more natural mode of defining the period than by the number of hours. The mother will thus be defended much more certainly than is now the case from milk abscess, this frequently happening from the milk becoming impacted before the child has even began to suck, while the child obtains all the necessary and the only proper nutriment the very moment that nature has appointed.

New-born infants frequently undergo much griping, and the maternal milk is insufficient to expel the offending matter: the skin is at the same time frequently jaundiced. In this case, a small quantity of castor oil generally is sufficient to remove the evil. Occasionally it does not prove effectual, and sometimes even a grain of calomel may be required; but this will very seldom happen. It is enough, however, here to have noticed the principle upon which these disorders are to be overcome, viz. by gentle aperients; and it cannot be too strongly inculcated, that to neglect them is to endanger the life of the child. We have seen the watery colic more than once induced by such negligence; and few practitioners are ignorant of the fatality of this disease.

For the first few months from birth, the infant should be entirely confined to the breast for support, nor even is it necessary to give it this so frequently as is usually done. Once in an hour and a half or two hours, for the first three or four months is quite enough; and afterwards, four times a day, at regular intervals; nor should any thing be permitted to interfere with the proper period of offering the breast. For in this way not only gradually does the child obtain regular habits, and become much more manageable, but a similar habit is induced in the breasts of the mother; se-

cretion goes on regularly, and the milk is given to the infant in its most perfect state of secretion. It is at least reasonable to conclude that this is the case, since we have many grounds for believing, that that which is most steadily is also most perfectly effected by nature.* No other food than that derived from the mother should be allowed till the first teeth appear, when for the first time a little more solid food may be given.

It occasionally happens that considerable difficulty is experienced upon the first change of diet; the bowels become deranged, the child is less lively, and every thing betokens a general disorder of the system. This may frequently be rectified by changing the kind of diet, according to the habit of the child. The common food in the part of the country where we reside is cow's milk, thickened with biscuit flour, or only with bread. If this be given in moderation, it does not very often induce disorder. Sometimes, however, it occasions diarrhœa, and the food after a time passes away in nearly an undigested state. When this occurs, it is necessary to change the diet; and this may frequently be done several times, before a proper diet can be found. We have in many such instances observed that rice milk has been very serviceable. The rice has been boiled in the milk for two or three hours, till it has become a perfect pulp, and separated by means of a sieve. At first the milk alone has been given; and as the child has grown stronger, a small quantity of the rice itself. It ought never to be forgotten, that one source of the disorder of the bowels is the stimulus afforded by the solid food being greater than they had been accustomed to; and hence the greater caution is necessary in effecting any change. Various other substances are employed for the same purpose, with whose general effects it behoves the medical man to become acquainted, that he may be enabled to meet the exigencies that are frequently presented. Arrow-root is often thus used, and, if pure, very rarely disagrees; it

* The following observations of Dr. Kennedy add absolute proof to this statement:—

'If a quantity of milk yielded by the cow be divided into three equal parts, each of which has been successively taken at the same milking, and set to rest during the necessary time, what was first drawn will give out much whey, and very little butter; the second have less whey and more butter; and the third be richer than either in curd and butter, and of course be more foodful and nutritious. * * * These results hold equally true and general relatively to the nature of human milk.' Hence Dr. Kennedy deduces the importance of the regularity which is above inculcated,—the propriety of lengthened intervals between the periods of suckling, and of permitting the child to remain long at the breast, that the secretion may be duly performed, and the child may obtain a nutritious diet.

is, however, too often mixed with common wheat flour, one of the most indigestible substances known in its crude state, being very apt to ferment upon the stomach. Grits, sago, oatmeal, &c., are also useful; the latter only in a costive state of the bowels, and requiring, therefore, to be vigilantly watched. Sometimes cow's milk will in no shape agree with infants, and we are then recommended by Dr. Clarke to substitute 'weak mutton, chicken, or beef broth, clear and free from fat, mixed with an equal measure of any of the mucilaginous or farinaceous decoctions, made from the substances above mentioned.' This kind of diet is to be persisted in till the molar teeth protrude, when food somewhat more solid should be permitted, but still farinaceous; nor should the least meat be given till all the cuspidati have appeared.

Dr. Clarke has very ably remarked upon the indications nature affords in the time of the appearance of these teeth, from the former being intended for the comminution of vegetable, and the latter for dividing animal food; and thus clearly marking when the changes should be commenced. When, however, meat is at length given, it should be in very small quantity, and, for the first two years, only every other day. Another circumstance also to be attended to is, that the meat be well minced for some time after the child has first began to take it, since, though provided with the instruments of mastication, a considerable period generally elapses before an infant understands how to perform it. Hence, indeed, is a very fruitful source of disease; for, accustomed to food which requires little comminution in the mouth, and scarcely any effort to effect what is required, animal food is swallowed in exactly the same manner with their former vegetable diet. But by most parents and nurses it is given in such pieces as are, to say the least, only fitted for children of seven or eight years of age, and in this state it is devoured. The stomach, however, at this early age is not able to effect the digestion of such large masses, and as a natural consequence, the child becomes irritable, feverish, and, unless very strong, the foundation is laid for some of the fatal diseases of infancy. Frequently in children thus treated the food may be observed in the fœcal evacuations almost unchanged.

It ought always to be kept in mind that nine-tenths* of the diseases of children are of an inflammatory nature, and that therefore their diet ought to be regulated accord-

* This is likewise the opinion of Dr. Goelis, than whom we could not have a more competent judge.

ingly; and even in diseases which appear of a contrary tendency, we have frequently found it exceedingly beneficial to limit the food of children. Thus in that state of the bones in which they yield and become incurvated, and when the whole frame appears enfeebled, health has been very quickly renovated, by abstracting from the quantity of food, having previously administered gentle aperients. But though the food given is diminished, there is every reason to believe that the real nutriment is increased, for such children generally derive more muscular vigour, and very often become even fatter. Nor is it difficult to account for this; for the stomach having been previously overloaded, has been unable to form perfect chyme; the same inability to effect the essential changes of digestion exists in the lower part of the alimentary canal, and it must follow as a necessary consequence that nutrition will be imperfect. But give the digestive organs rest, offer to them no more than they are capable of acting perfectly upon, and the contrary has place,—digestion is complete, nutrition is abundant. We have some proof of the truth of this statement, from a circumstance that has been frequently noticed, as peculiar to one particular occupation, viz. that of a cook. Cooks are for the most part very corpulent, yet they are not usually great eaters; but their food is taken in small quantities, and thus in the manner most favourable to the nutrition of the body. Nor, indeed, generally speaking, are those the most moderate in their diet, whose persons are the most spare; but the contrary is the fact, and one of the thinnest men we know is also one of the greatest eaters. The cry among nurses for strengthening and nourishing things, renders it highly important that this part of the subject should be well understood, and that we should be able to explain it to them in such a way as to ensure their assent and co-operation. We never hesitate in yielding to their opinions that a weakly child requires to be strengthened; but we endeavour to prove to them that their method of proceeding has a directly opposite tendency; that the stomach has been urged beyond its strength; that the mode of recruiting it is to give it rest; at the same time holding out a prospect that the strict system of diet laid down may perhaps be altered as the child improves. Long, however, before entire recovery has place, they become convinced of the propriety of the regimen, from their own observation of its effects; and there is then no difficulty in continuing it for an unlimited time.

If, however, this care respecting diet be had from earliest infancy, the probability is that none but the ordinary diseases, as measles, &c., will ensue; and habits will be engendered,

which will preclude the necessity of continual vigilance on the part of the parents. Children are so much more lively, and feel themselves capable of so much more enjoyment, when they have only necessary food than when overfed, that they will soon refuse any thing beyond the proper quantity ; and when rules are once acted upon, nothing is more easy than to ensure their continued observance.*

We have thus brought the principal circumstances of the diet of infants, till care is no longer necessary, together, that we might include the whole at once ; but we have omitted on this account all mention of weaning the child. As during some time after artificial food is given, infants still continue to suckle, it is necessary to caution both nurses and parents against giving the breast very soon after the child has had other food. This is the more necessary, as they act at least as if they thought that the one stood not in the place of the other. We have frequently known mothers to continue suckling as often after the child had began upon artificial diet as before ; and have even found it difficult to persuade them that it was wrong. It is too manifestly so, however, to require any farther notice here ; and we have only remarked it as another, and often little suspected, means of overfeeding infants.

With respect to the time of weaning, custom has unquestionably been most erroneous, especially among the higher classes in this country, eight or ten months being for the most part the limit of suckling. The lower ranks, however, from a knowledge that women who suckle rarely become pregnant, continue it frequently for two years ; and the Irish we have seen, who had persisted in it so long as three years. The proper time seems to vary from about eighteen months to two years, the breast having been in some degree withdrawn from the first appearance of the molar teeth. When suckling is thus prolonged, it is surprising how much more readily and easily children are weaned ; whereas when they are removed from the breast before they are thoroughly capable of taking artificial food, the time of weaning becomes exceedingly troublesome. That also the continuance of suckling so long is serviceable to the

* We have omitted one circumstance, which, however, ought to be noticed, we mean variety in the food of infants. It is clearly dictated by nature, if she is properly attended to, that for the first few months it should be uniform. The advice of Celsus on another occasion is very applicable here. ‘ At si neque vis, neque cupiditas deest, nullâ varietate sollicitandus æger est : ne plus assumat, quàm concoquat, neque verum est, quod ab Asclepiade dicitur, facilius concoqui cibos varios ; *eduntur quidem facilius* ; ad concoctionem autem materiæ *genus et modus* pertinent.’

child, we have not only our own experience and observation to rely upon, but analogy from some of the lower animals, especially from colts. Horse breeders are well aware, that those colts become the strongest and most capable of exertion which run longest with the mares.

By far, however, the most difficult task in bringing up infants is, when from circumstances they are obliged to be dry nursed. Some children, it is true, become readily accustomed to artificial food, and thrive well with it; and this frequently happens in children of the same parents. But this is not the usual course; and it may be asserted, without the slightest fear of contradiction, that at least four out of five dry-nursed children die, either immediately, from the effects of their unnatural diet, or from diseases of which it lays the foundation.

The two principal circumstances to be remembered in bringing up infants artificially, are to procure food as similar to that which they would have drawn from the mother, and to make them take it by suction.

The first of these conditions can for the most part be fulfilled in a very small degree, since cow's milk, which is the most procurable, contains so great a quantity of curd as almost to render it improper for the human infant. Asses' milk, if it can be procured, is the best substitute for the mother's milk; but unfortunately this is generally so scarce that it is necessary to find some other food. Dr. Clarke has merely recommended, under such circumstances, the same diet that has been mentioned for infants when artificial food is first given to those that suckle. The same general rules, indeed, hold good in both cases; and the quantity is even more important in proportion as the age of the child is much less, and the stomach far more delicate. But the manner in which food is administered to new-born infants is not less important than its quantity and quality. Nothing certainly is more disgusting nor more injurious, than the custom of giving food with a spoon under such circumstances. The child is laid upon its back by the nurse, and the fluid is literally poured into its mouth; and whether it passes into the larynx or not, is, so far as the nurse is concerned, entirely left to chance. Bottles are now so readily procurable, by means of which the child may take its food by suction, that the use of a spoon is utterly inexcusable. But even the bottle is liable to abuse: the milk may escape too rapidly, or not rapidly enough. In the former case, it is as bad as a spoon; in the latter, the child is tired out before it has obtained sufficient nutriment. The means of remedying these inconven-

niences may be readily discovered by a little attention, and a resolution that the child's health shall in no way be made to yield to the nurse's indolence.

It will, however, happen sometimes that no artificial food will agree with an infant, and the only alternative is a wet nurse. The general rules for the choice of a wet nurse are very easily laid down and remembered. The woman must of course enjoy good health, and have plenty of milk; but it is important also that she should have been confined very nearly at the same time with the mother of the infant; for 'the milk secreted by the mother varies very much as the age of the child advances; and that which is adapted for a child seven months old is by no means composed of the same constituent parts as it was six months before.'

The next part of the subject which requires our attention is the dress of children. Nothing can be well imagined more irrational than the old mode of binding infants immediately after birth. Fortunately this absurdity has well nigh passed away, though still many nurses are fond of binding the bowels and chest so tight as materially to impede their functions. The great error, however, of the present time, and one of wide extent, is a wish of bringing up children hardily, upon the supposition that those so brought up are the strongest in adult age.

It is, indeed, as Dr. Clarke has observed, in part true, 'since children who survive the seasoning are generally the strongest;' but the numbers who die in this seasoning are little known. The observations of Dr. Clarke upon this subject are indeed so true, and accord so accurately with our experience, which has been very extensive, that we shall lay it before our readers in his own words.

'To rebut the force of these observations, the question has been often asked, what becomes of the children of the poor? This mode of getting rid of a difficulty by putting a question is very easy and very imposing upon ignorant persons who have bestowed little attention on this subject. But if they will inquire, they will find that comparatively few of the children of the poor are reared; and that a large proportion of the deaths in the bills of mortality are among the offspring of this extensive class of the community, especially in large cities and towns.'

The number of children among the poor that are reared, compared with those born, is, indeed, truly surprising. We have very frequently in the course of a single morning met with several women who have had twelve or more children born alive, but of whom not more than three or four have attained the age of manhood. Such circumstances as these,

whatever may be attributed to clothing, speak most decisively against the system of nursing that prevails among the poor.

There are several circumstances connected with the clothing of infants well worthy considerate attention. The principal of these are the nature of the stuff employed in making them, its shape, and its fastenings. Flannel is unquestionably the material which ought most especially to be employed in the dress of children. The dress may be composed of other materials also, but the one next the skin ought always to be of woollen.

In every period of life it is of infinite importance that the individual shall not experience sudden nor violent changes of temperature; but it is, if possible, doubly important in childhood, when the whole system and every part of it is peculiarly excitable. Hence, therefore, if the secretion from the skin be impeded, it may, and often does, produce some affection of an internal organ, and lays the foundation for many of the most unmanageable and fatal diseases of infancy. Even here a slight reference to the habits of inferior animals may now be without its use, because their instinct directs them according to the true and genuine intentions of nature. Now, all animals whose young are not well clothed when expelled from the womb, are kept close by the mother till they become so; she remains with them, defends them from the external cold, and only then exposes them to the air, when having acquired a proper clothing they are no longer affected by every minute change in the atmosphere. The inference from these to man is too manifest to require any lengthened argument; it is evident that the same care must be required with the human offspring.

The grand object is, indeed, to preserve a due warmth to the whole body; but there are parts which fashion has destined to exposure, although the consequences are the most injurious. Custom and fashion together have actually reversed things; and while the chest is left bare the head is clothed as thoroughly as can well be done. The opposite plan, however, ought unquestionably to be pursued. Dr. Clarke even derives many of the evils of dentition from this source; and there is no one whose observations are better deserving of attention.

‘Another error,’ says this author, ‘in the management of children, which probably adds to the inconveniences of dentition in this country, is that of keeping the heads of young children very warm by clothing, by their wearing often flannel caps, by having their heads almost constantly wrapped in a warm woollen shawl, which nearly envelopes their heads, and is frequently drawn closely

round them. The formation of the teeth naturally incites blood to the head, and by these erroneous measures, adopted to prevent cold, more blood is determined to that part from which the consequences above described (inflammation of the gums, eruptions of the head and face, &c.) will be likely to arise. It will be found in practice, that children whose heads are kept most cool, and are daily washed with cold water, are less liable to serious complaints at the time of teething. Even weakly children, and those otherwise not healthy, frequently suffer little, or not at all during dentition, because from the nature of their constitutions they are less susceptible of inflammation and fever.'

That diseases of the chest are the frequent consequences of insufficient clothing needs no illustration. It is matter of hourly and daily observation. Nor is it less certain that disorders of the bowels have the same origin; both, indeed, in children, as also in adults, are frequently united, as both also are frequently excited by the same cause.

The parts that ought then particularly to be covered, and the dress should of course be so shaped as to effect it, are the chest, the bowels, and the feet. The motive for attending to the two former is obvious; and so sensible as people are, in more advanced age, that cold and damp feet are frequently injurious, it seems surprising that more caution is not had in this respect during infancy.

The dress ought also to be made so loose as in no way to impede the free action of the child. The limbs should be covered, but not in the slightest degree restrained. There is not the smallest doubt that all bandages serve rather to deform than to preserve the natural shape; but independently of this many serious accidents may ensue from such management. Dr. Kennedy observes, and truly:—

'By such causes, paroxysms of giddiness, swoonings, and even apoplectic seizures, are either fostered or hurried to their height, in persons predisposed to such affections, by their organic constitution, or their habits of life.'

In illustration of this remark, he quotes, from Portal's *Treatise on Apoplexy*, the case of 'un grand personnage,' who sustained an attack of this disease, occasioned by the use of corsets and drawers tightly laced, for the purpose of diminishing the volume of his belly and limbs.'

Moreover, as the free nourishment of the limbs depends upon the freedom of circulation, it is manifest that injury must ensue to these also whenever the dress is tight. Hence is a very common though unsuspected source of the emaciation and weakness of the extremities in children.

The mode of fastening the dress is another very important point. The employment of pins ought entirely to be prohi-

bited. In the first place, it is scarcely possible to place them in such a manner as to equal tape, &c. for fastening the dress; in the second, they are liable to move with every movement of the child's body, and consequently to endanger injury from the point. Idleness is the only excuse that can be offered for using them; and in this as in most other cases it provides double trouble for those who indulge it. There can be no doubt that much more time and labour must be employed in attempting to fix pins properly than in tying double the same number of strings. Even, however, death has been the consequence of the inconsiderate employment of pins. We quote the following statement of Dr. Underwood's from a note of Dr. Kennedy:—

'A gentlewoman many years ago informed me, that one of her children, after long and incessant crying, fell into strong convulsions, which her physician was at a loss to account for; nor was the cause discovered till after death, when on the cap being taken off, which had not been changed on account of the child's illness, a small pin was discovered sticking up to the head in the large fontanelle.'

The two remaining subjects connected with the regimen of children, though equally important in themselves, may be passed over somewhat more cursorily. They are *air* and *exercise*.

A free exposure to pure air is of the greatest consequence to infants. In maturer age custom has generally made man insusceptible, at least in degree, to the ill effects of a crowded city, and an atmosphere loaded with impurities; but in infancy the human frame is much more easily acted upon, and cannot bear with impunity this unnatural situation. Hence it is that children bred up in large towns are for the most part pale, sickly, and incapable of active exertion. Nor is the difference in appearance the only evil. All the consequences that we have referred to errors in diet may, and frequently do ensue, from breathing in an impure air; and it is truly astonishing how rapidly children recover from disorders in the digestive organs and their consequent evils, upon removing into the country. Often, indeed, medicines seem to have lost their power, till thus assisted by a removal into a clear atmosphere; but to medical men, who are residents of large towns, it must be useless to dilate upon this topic. Repeated experience must have proved to them that a country residence is often the only, and always the most efficacious remedy they have in their power. The frame that has become pallid in the town, assumes the florid hue of health; limbs that have been deformed from deficiency of nutriment,

recover their natural shapes, and the whole system becomes sound and vigorous.

Nor is exercise a matter of less moment. Here, however, it is necessary to lay down some cautions as to the extent and the mode of exercise.

In very young infants, infants under three months old, it should be of the gentlest kind; but as they increase in strength, it may and ought to be more active. At first simple carrying about is sufficient, then tossing up and down in the nurse's arms; and as soon as the child is able, he should be laid on the floor, and encouraged to roll about; but the utmost care ought to be had that no attempts are made to force the child to walk. When he is able, and he feels his limbs capable of supporting him, he will voluntarily make every effort to attain the power of walking; and when they are not, any attempts to compel him may produce a deformity in the legs. This is so serious an evil when it does occur, that too much caution to prevent it can scarcely be enforced. To enter at any length into the consideration of the different kinds of exercise, and of the machines which have been invented for carrying them into effect, would require more space than we can well allow for any single subject. They are, however, well known, nor can any difficulty exist as to the mode of employing them.

We shall close our remarks upon the regimen and diet of children with the following very apposite observations of Dr. William Heberden; which although they may appear trite, are perhaps for this very reason doubly valuable. Their very triteness is a proof of their correctness.

'It is always desirable, as far as we are able, to prevent diseases, rather than to cure; to obviate their causes, rather than to remove their effects; and this is particularly the case with regard to children. We see other people broken down with luxury and intemperance, worn with care or enervated by indolence, whence they become at once more liable to sickness, and are less easily restored: but the treatment of children is much more simple.

'They never supt in solemn state,
Nor undigested feasts did urge their fate,
Nor day to night luxuriously did join,
Nor surfeited the rich Campanian wine.'

'But if the frail and helpless condition of infants demand a nice attention; if man be ushered into the world full of infirmities and wants, yet we are all born with a certain spring of vitality, a self-restoring power, which, though sometimes disordered and oppressed, does neither require nor bear the administration of many remedies; let then art take advantage from nature, and follow in her steps: let all tight bandages be removed; let all superfluous food be with-

held, that the play and growth of the limbs may be unrestrained, and that the stomach may not be overloaded, nor the digestion impeded. What distortion of the limbs, what bad shapes have we to deplore from the former of these causes! On the other hand, what multiplied evils arise from indigestion! Sometimes there occurs vomiting, sometimes purging, sometimes distension, sometimes griping, and very frequent acidities. It is doubtful, whether we may not often attribute to the same origin likewise, the thrush, worms, wakefulness, pining, weakness, eruptions, and convulsions, to all which children are especially subject. But when we observe that milk is the sustenance naturally provided for infants in the breast of their mother, why should not the food, which is artificially prepared, be made to bear some near resemblance to this, which we are sure must be proper for them? For what can any one hope to effect by the most elaborate combination of drugs, while every day is furnishing fresh matter of disease? In fact, I am persuaded the health of children may best be consulted, not by the daily invention of new remedies, *but by a careful management and prudent regulation of their diet, so as to preclude the most usual sources of their disorders.*

II.

ANATOMY OF THE FÆTAL BRAIN.

The Anatomy of the Fetal Brain; with a Comparative Exposition of its Structure in Animals. By FREDERIC TIEDEMANN, Professor in the University of Steidelberg, &c. &c. Translated from the French of A. J. L. JOURDAN by WILLIAM BENNETT, M.D. *To which are added, some late Observations on the Influence of the Sanguineous System over the Development of the Nervous System in general. Illustrated by Fourteen Engravings.* CARPRAE, Edinburgh. 8vo. Pp. xviii.—324.

THE study of the order in which the several parts or organs of the human body are formed, although it may at first sight appear rather curious than of any particular utility, is in reality of high importance to all who value either anatomy or physiology; and will always be found to lead to the elucidation of valuable truths, or to shake, by the unexpected weight of facts, whatever venerable errors have imposed upon the world. Of all organs, the most important in itself, and that which is most interesting to the curiosity of intellectual beings, is the brain, by which the higher part of their nature is manifested: and it may readily be conceived, that by tracing the formation and gradation of this structure in man and the lower animals, and comparing what is seen with what is known of the mental or sensorial manifestations attached to each gradation, we cannot fail to arrive at much new and valuable matter for reflection. In the course of

such inquiries, we may possibly learn what peculiarities of structure restrain the manifestation of mind in animals so far within the limitations of the human intellectual faculties, and may even become eventually able to assign with some exactness distinct offices to precisely marked portions of brain. Such may be said to be the subject of the book before us, which has for some time obtained a just celebrity on the continent, and is now first translated into our language.

Of a work almost wholly descriptive, it will scarcely be expected that we should write a review. The facts it contains are such as not many even of those devoted exclusively to anatomical pursuits have had leisure, or opportunity, or inclination to verify, but the details appear to have been collected with so much care, and are given with so much clearness, as to leave no doubt of their general correctness; so that the reviewer's task is limited to giving a general account of the publication, with some examples of its style, and some notice of the conclusions clearly deducible from its contents, and in the hope of exciting attention to the work itself, of which no abstract can give a very correct idea, to this unambitious, but we hope not useless task we shall in the present article chiefly address ourselves.

The first part is devoted to a very circumstantial description of the foetal brain in each month of gestation; the second consists of general remarks on each of its component parts, with a comparison of corresponding parts of the brain in the different classes of animals. The embryos, which form the subject of description in the first part, were hardened for the purposes of examination by immersion in spirits of wine for a considerable time; and for the satisfaction of those who may entertain doubts concerning the exactness of his figures and descriptions, Professor Tiedemann yet preserves the brains of embryos at all the periods. The descriptive portion of the book is divided into nine parts, each relating to the state of the foetal brain in one of the months of the existence of the foetus up to the full period of gestation.

At the end of the fourth week after impregnation, although the elongated, semi-transparent, gelatinous mass, which constitutes the foetus, may be seen to terminate at one extremity in a rounded swelling representing the head, the middle portion forming a kind of pad communicating with the umbilical vessels, the brain and spinal marrow do not yet exist, and their place is occupied by a limpid fluid. Examined a week or two later, the embryos are about four or five lines in length; the head is voluminous, and bent forwards; a small fissure is discernible, representing the mouth, and there are

two small eyes without lids: the brain and spinal marrow at this period present a visible vesicular form in the human subject, and the same is their first appearance in the embryo of birds and of mammiferous animals.

In order that the subsequent portion of this article may be readily comprehended, we shall first give Tiedemann's description of the appearance of the spinal marrow and brain almost as early as any of their component parts can possibly be distinguished by the assisted eye: the original is aided by very excellent engravings, but the reader will, we believe, find the following extract not in any degree unintelligible without:

‘ In an embryo, which, curved in the manner already described, was about seven lines in length, and the configuration of which seemed to announce that it came from a woman about seven weeks pregnant, I was enabled, to my great surprise, to distinguish, perfectly, the structure and disposition of the brain and spinal marrow. The cavity destined to receive this latter was situated immediately beneath the common integuments, because the dorsal muscles and arches of the vertebræ were not yet formed. Having made a longitudinal incision in order to lay open this cavity, I prolonged it with a pair of small scissors as far as the forehead, following the middle line of the occiput and summit of the head, and then completely opening the cranial cavity by a crucial incision, I perceived the membrane which covered the internal surface of the cranium and vertebral canal, and which consequently enveloped the brain and spinal marrow. This membrane, the *dura mater*, nearly divided the cavity of the cranium into two equal portions, the limit of which was the *tentorium cerebelli*, and beneath were the brain and spinal marrow enveloped by the *pia mater*. This latter membrane adhered so intimately to the substance of the two organs, that it was difficult to detach it without, in some degree, destroying the inclosed pulp. The spinal marrow, bent in the same direction with the vertebral column, was very large and thick, in comparison to the volume of the embryo, and in particular to that of its brain; it extended nearly as far as the inferior extremity of the trunk, where it terminated in a point; its thickness was very nearly the same in its whole extent, and it was about half a line in breadth. On the middle of the posterior surface existed a longitudinal fissure, into which penetrated the *pia mater*. The margins of this fissure were very thin, and in passing between them the extremity of a flattened needle, I easily separated them from one another, and turning them aside, thus laid open the interior canal, which extended as far as the inferior extremity of the spinal cord, and was continuous above with the fourth ventricle. I have found it constantly in the spinal cord of embryos, and have therefore termed it the spinal canal. The exterior surface of this latter was composed of two cords, the demarcation of which was indicated by a slight longitudinal groove,

but in which I could not distinguish any trace of fibrous structure, even with the assistance of a powerful lens.

‘ At its superior part, where it was continuous with the brain, it formed, on either side, a projection of considerable size, and was nearly one line in breadth. It was, no doubt, this projection which formed the tubercle observed on the nape of the fœtus. Beneath this, the spinal marrow formed a curve, and bent forwards to be continuous with the brain contained in the cranium; it was dilated in front of this enlargement, at the point where it gave origin to the fourth ventricle. On either side of this latter arose, from the spinal marrow, a thin and narrow plate, a flattened fasciculus, which inclined from without inwards, and remained in apposition with that of the opposite side, without uniting into a single mass; these two fasciculi constituted the cerebellum, and formed a sort of arch over the fourth ventricle. I have been frequently convinced, both on this brain, as also on others taken from embryos of the same age, that they were not united on the middle line; for I have succeeded in separating them with two delicate needles. The cerebellum was one line and two-thirds in breadth. The spinal marrow, after having furnished the plates constituting the cerebellum, rose a little, and forming the *crura cereb. i.* terminated by bending from before backwards, and from below upwards. In this curve was contained the rudiment of the *tentorium cerebelli*, of which I have already spoken.

‘ In front of the cerebellum I perceived two other membraniform productions, also bent inwards, and separated from one another by a longitudinal fissure. These productions are evidently masses which subsequently give origin to the *tubercula quadrigemina*. Taken together, they are about one line in breadth, and one in length. After having turned them to the outer side, as also the two fasciculi of the cerebellum, I observed the fourth ventricle passing into the interval between them, and forming thus the aqueduct of Sylvius, still very broad at this period. At the bottom of this aqueduct, I perceived, very distinctly, the two *crura cerebri*, forming two elongated cords, from the summit of which rose two membranous semi-arches, corresponding to the *tubercula quadrigemina*. More anteriorly were two rounded protuberances, about two-thirds of a line in length, and parted from one another by the aqueduct of Sylvius, at their superior part, but united together below. These eminences, lying upon the *crura cerebri*, or formed by them, were evidently the optic chambers (*thalami optici*), and the interval existing between them corresponded to the third ventricle. In front of these eminences existed two others, in apposition with them; they were about one line in length, and appeared to be the rounded extremities of the anterior part of the *crura cerebri*. These were evidently the *corpora striata*. Finally, from the second pair of eminences rose two membranous productions, curving inwards and backwards, forming the commencement of the hemispheres of the brain.

‘ I have perceived no other traces of the other parts of the brain,

particularly of the pons Varolii, commissures, corpus callosum, or fornix, or its appendages. I shall hereafter more fully explain when and how these different organs are formed.'—P. 18.

In the *third* month, or in an embryo of about nine weeks, the brain still becoming more developed, the cerebral substance, in the form of a membrane, was observed to bend backwards and inwards, so as to cover the corpora striata, and this membrane evidently represented the rudiments of the cerebral hemispheres; but 'the other parts of the brain, as the pons varolii, the corpus callosum, fornix, cornua ammonis, commissures, &c., were not yet in existence.' In an embryo of about eleven weeks, the length of which, from the summit of the head to the extremity of the trunk, was sixteen lines, the eyes were nearly covered by lids, the profile of the nose made a slight prominence, the arched portions of the cartilaginous vertebræ were not yet united. In this embryo the two cerebral hemispheres were very small, not yet covering, as in a more advanced state they do, the cerebellum or the tubercula quadrigemina, which were very large in proportion to the cerebellum: the hemispheres were parted by a deep fissure, and their anterior lobes alone could properly be said to be formed, the posterior and middle lobes resembling two short appendages; their surface was smooth, and without convolutions: when separated, the corpus callosum and fornix not yet being formed, the optic chambers and the third ventricle were brought into view: the union of the hemispheres in front of the optic chambers marked the origin of the corpus callosum.

'The hemispheres evidently represented two membranous vesicles, the walls of which were scarcely one-fourth of a line in thickness. On cautiously turning them aside, I succeeded in spreading them out in the form of membranes, so that the interior of the lateral ventricles, and the eminences analagous to the corpora striata, which occupied the floor, were brought into view.'—P. 36.

The eminences analogous to the corpora striata constituted the last dilatation of the crura cerebri, and the membranous hemispheres arose from their external and anterior border; the fan-like expansion of the fibres of the spinal marrow being easily distinguished on the internal surface of the latter when they were everted. By means of a perpendicular section, the anterior pillar of the fornix was now perceptible, in the form of a narrow band, in front of the optic chambers, and behind the commencement of the corpus callosum, rising from the base of the brain, particularly from the mammillary eminences. At this period neither the pineal gland, nor its pedicles, were visible.

‘The olfactory nerves, very voluminous, formed two bands, rising laterally from the fissure of Sylvius, between the anterior lobes and posterior appendages, and terminating by a small rounded tubercle. They bore a strong resemblance to the mammillary eminences in the brain of animals. They were both hollow, and their cavity was continuous with the anterior cornu of the lateral ventricle which passed into the olfactory nerve in front of the corpus striatum. It is evident that these two nerves are prolongations or hollow appendages of the brain. Behind the olfactory were the two optic nerves, voluminous and united together; the two ribbon-like cords which they represented wound round the crura cerebri from below upwards, and from before backwards. I succeeded in tracing them as far as the surface of the optic chambers, and of the common mass of the tubercula quadrigemina. I could not at this period perceive the corpora geniculata. The other cerebral nerves existed, but the extreme delicacy of their tissue, and the considerable thickness of the pia mater prevented me from tracing them to their origin. I have most distinctly seen the nervus accessorius of Willis.’—P. 39.

In the *fourth* month, the bones of the cranium, and the arches of the vertebral canal, are still stated to be cartilaginous. The arachnoid membrane was not yet perceptible; but the dura mater was strong and thick, and the pia mater of some consistence, and traversed with numerous vessels: the corpora pyramidalia not seen before, were now perceptible, but not the corpora olivaria: a cord was seen near the situation in which these two bodies were subsequently to be developed, proceeding forward to gain the pons varolii, and giving origin to the cerebellum, which cords were the corpora restiformia. The pons varolii, though now discerned, was still very narrow. The following observations bear in part upon a subject which has furnished matter of dispute.

‘The two cords of the spinal marrow, situated on the anterior surface and on the sides, and composed of longitudinal fibres, many of which in rising proceeded obliquely backwards, and were reflected inwards to form the canal, these two cords, I say, augmented gradually in thickness at their superior part, thus forming the medulla oblongata. Each divided into three fasciculi: 1st, the corpus restiforme, situated on the outer side; 2d, the middle fasciculus, on which is subsequently developed the corpus olivare, and which proceeds forward to gain the crura cerebri; and, lastly, the internal fasciculus, representing the corpus pyramidale, also continued forwards into the crura. The fibres of the two internal fasciculi or pyramidalia crossed before forming the corpora pyramidalia: this decussation I clearly perceived in separating the margins of the canal of the spinal marrow; in doing so, I observed the fibres which proceeded from behind forwards, the one from the right fasciculus to the left pyramid, the other from the left fasciculus to the right pyramid. However, these fibres should be very

numerous to authorise our admitting a complete decussation of the principal cords of the spinal marrow.'—P. 43.

The superior surface of the cerebellum was yet smooth, without a trace of grooves or hemispheres; and in a perpendicular section of it, Professor Tiedemann could perceive neither stems, branches, ramifications, or leaves. The pineal gland, now small, round, and flattened, and its pedicles, were visible in the fourth month, as well as the corpora quadrigemina and optic chambers, by separating the hemispheres of the brain. The corpus callosum was still very inconsiderable; and behind it rose, from the floor of the third ventricle, two thin cords, the anterior pillars of the fornix.

'The anterior commissure was situated in front of these pillars, which proceeded first upwards, and uniting together at the posterior part of the corpus callosum, separated again, passing backwards in the form of two thin productions, and, winding round the optic chambers, descended behind these latter to the base of the posterior lobes of the hemispheres; these two productions were the posterior pillars of the fornix.'—P. 51.

The rudiments of the cornu ammonis and hippocampus minor were also visible. Here and there on the superior surface of the cerebellum some grooves were seen, into which the pia mater penetrated; the hemispheres were yet membranous sacs. A clear account of the distribution of the fibres of the cerebral substance concludes the description of the appearances at the fourth month; and although our quotations are becoming more frequent than we intended, we cannot resist laying before the reader what is so very important as relates to the growth or development of the brain.

'I shall here describe, as far as I was enabled to trace them, the manner of distribution of the fibres of the cerebral substance, which are too well marked to allow of the slightest doubt on their existence. The two crura cerebri, which are nothing more than the two principal cords of the spinal marrow, proceeding forwards, after having been covered by the transverse fibres of the annular protuberance, separate a little from one another to the right and to the left: they are of a fibrous texture, the fibres proceeding obliquely forwards and upwards. They send at first, to the membranes of the tubercula quadrigemina, ascending fibres, which reflecting inwards and uniting with those of the opposite side, form the roof of the mass common to these tubercles. I perceived these fibres as soon as I had scraped away a thin layer of unfibrous cerebral substance from the external surface of the membranes which were subsequently to become the tubercula quadrigemina. The crura cerebri afterwards passed into the optic chambers, or rather swelled out to produce these emi-

nences, in which I could not distinguish the fibres until I had elevated from their superior and internal surface a thick layer of unfibrous cerebral substance. Some fibrous fasciculi, the progress of which I shall hereafter describe, descended into the corpora mammillaria. All the other fibres, which were very numerous, passed beneath the optic chambers, and proceeding forwards and outwards, spread like the branches of a fan into the membranes of the hemispheres. This radiation became evident on detaching the corpora striata from the crura cerebri, and turning them backwards, by means of which I also observed many fibres ascending into these bodies, where they were covered by a thick layer of unfibrous substance. The fibres which radiate in the hemispheres proceeded laterally forwards and backwards, but all from below upwards; they were then reflected inwards to form the superior wall or roof of the lateral ventricles, and re-descended afterwards along the internal surface of the hemispheres to gain the pillars of the fornix. Those of the two sides united together in front, from whence resulted the corpus callosum, the commissure of the hemispheres. On the internal wall of the hemispheres I traced the cerebral fibres with the greatest facility. The hemispheres of the brain are then but membranes reflected inwards and backwards, and produced by the expansion or radiation of the crura cerebri. We can now conceive, without difficulty, why, on the outer side, near the corpora striata, they are the thickest, and on the inner side, on the contrary, the thinnest; for the fibres of the crura cerebri are still very compact near the corpora striata, while at the other extremity they are so expanded as to have lost more than one half of their thickness.'

'Such of the fibres as descend on the internal side of the optic chambers and proceed to the corpora mammillaria, turn from behind forward in these eminences, and ascend behind the corpus callosum, in the form of the anterior pillars of the fornix, to re-descend farther into the depth of the brain, as the posterior pillars of the same fornix, or the cornua ammonis.'—P. 55.

We must now pass over, in a much more cursory manner, the anatomy of the fifth, sixth, seventh, eighth, and ninth months, finding that without larger extracts than are consistent with our limits, it is difficult to represent the author's meaning correctly, and impossible to give by abridgement an adequate view of the whole series of his observations.

A foetus examined at the *fifth* month was the first which presented evident traces of the division of the cerebellum into a central part or vermiform process, and into lateral parts or hemispheres. The cerebellum in this subject was distinctly divided into five lobes, as described by Reil, of which a clear representation is given in Tiedemann's sixth plate, as they appear on a perpendicular section being made. The lobules, termed spinal, by Dr. Gordon, and almond-like, by Mayo, and tonsils, by Tarin, did not exist, nor the flocks

and valve of the latter anatomist.* The hemispheres of the brain, though considerably increased, did not yet altogether cover the corpora quadrigemina; but on separating them, many deep grooves, or commencing convolutions, were perceived on their internal or commutual region: the optic chambers, the pineal gland and its pedicles, &c., were at the same time visible, being yet not covered by the corpus callosum and fornix. The walls of the hemispheres were yet very thin; and there was a deep fissure between the corpora striata, marking the future situation of the tenia semicircularis. Speaking of the optic nerves, Tiedemann says, 'I can say nothing of their crossing:' to which the translator appends a passage, in which M. Serres assures us he has seen the decussation in early embryos; but that the deposition of white matter between the nerves rendered it more obscure at a later date.

In a fœtus of twenty-one or twenty-two weeks, or in the sixth month, the arachnoid membrane was observed, extremely delicate, forming a thin and transparent pellicle on the surface of the pia mater. The two hemispheres were voluminous, smooth, and without convolutions or anfractuosités, covering not only the tubercula quadrigemina, but nearly the whole of the cerebellum. The pons varolii was broad and prominent; the crura were slightly separated from one another in front of it; and anterior to and between them was a voluminous mass, representing the corpora mammillaria at this period confounded together. The two hemispheres could not now be separated without rupture of the corpus callosum, the formation of which evidently takes place from before backwards, according as the hemispheres are developed, and extend in the same direction. Numerous deep grooves were now observable on the cerebellum; 'for not only the lobes already existed, but branches were developed on the stems, as appeared evident by the perpendicular section.' The corpora dentata were also now perceptible.

'The optic nerves wound round the crura cerebri from before backwards, and from below upwards. I succeeded in tracing them to the external surface of the tubercula quadrigemina and optic chambers, where they formed a small eminence, the corpus geniculatum, which I detached with the nerve itself in the form of a layer free from all fibrous appearance, from the external surface both of the tubercula quadrigemina and of the optic chambers.'—P. 81.

* 'The flocks are a pair of additional processes found in the human cerebellum, and not in that of animals, which emerge obliquely from between the almond-like processes, the medulla oblongata, and the peduncles of the annular protuberance, and are connected by the posterior medullary velum.'

—Note by the Translator.

The thinness of the membranous hemispheres has been already remarked : each month exhibited them increasing in thickness, new cerebral pulp being separated from the blood, according to the author's opinion, by the many ramifications on the internal surface of the pia mater, which pulp is disposed in layers from within outwards, in the form of fibres applied to the surface of those previously formed. When the brain is torn, these fibres are visible ; and upon them a layer of soft unfibrous substance, which is the last deposition, not yet disposed in the form of fibres, but not to be confounded with the unfibrous cortical substance, of which, as will presently be pointed out, the formation does not take place until a very late period of foetal life.

In a foetus in the *seventh* month, the cerebellum was completely covered by the hemispheres of the brain, which were now very large, and exhibited the rudiments of convolutions. The superior surface of the cerebellum was covered with numerous transverse grooves, forming lobes, or merely ramifications, according to their depth. The posterior border of the cerebellum, reflected inwards, represented the posterior valve, prolonged on either side into a thin and flattened production, already referred to, to which the name of *flocks* has been given by Reil.

'The corpora restiformia, arising laterally from the spinal marrow formed in the interior of each hemisphere of the cerebellum an oval swelling constituting the ciliary body, (corpus dentatum,) or the great medullary nucleus of Reil, from which some fibres radiated into the stems and ramifications. From the same point other fibres were detached, which, passing outwards and forwards, surrounded the olivary and pyramidal fasciculi of the spinal marrow, and united together to form the pons varolii.'—P. 92.

By a perpendicular section in this stage, the stems, branches, and ramifications, were seen evidently to exist in the cerebellum ; but there were yet no leaflets, a production altogether exterior, and of a later date. This observation, which may be hardly intelligible without a reference to the plates, is of importance, inasmuch as it shews that the development of the cerebellum takes place from within outwards. The corpus callosum might now be exposed, by a cautious separation of the two hemispheres, and seen extending backwards as far as the optic chambers : it was evidently composed of transverse fibres, penetrating into, and uniting the hemispheres.

In the *eighth* month, the periphery of the cerebral lobes, but particularly of the anterior and middle lobes, was traversed with furrows. The pyramidal fasciculi were traced across the pons varolii, their longitudinal fibres crossing,

and in many points mutually uniting with its transverse fibres: from this protuberance they issued more voluminous than they entered; and forming the *crura cerebri*, passed upwards into the hemispheres of the brain. An excellent representation of this arrangement is given in the 14th plate; and in the 13th, shews the subsequent expansion of the fibres of these fasciculi, from below upwards, and from before backwards, after traversing the optic chambers and corpora striata, for the description of which we can only refer the reader to pages 108 and 115. The discovery of this disposition of the fibres is not modern, having been noticed by Varoli, Vieussens, and Morgagni; but Gall seems to have been the first who pointed out that the fibres did not descend, but ascended.

In the *ninth* month of uterine life, the arrangement and destination of the fibres of the pyramidal bodies just described, was also observed; those of the corpora olivaria were seen to pass upwards between the pyramidal fasciculi and corpora restiformia, and penetrating the mass of the tubercula quadrigemina, to unite with those of the opposite side. 'The corpora restiformia entered the cerebellum, and formed there the medullary nucleus, or rhomboidal body.' 'The pineal gland at this period was an elongated, flattened, soft body, without a trace of sandy matter. The corpora striata no longer formed an eminence so distinctly marked as in the brains previously examined; but were more sunk in the now thickened wall of the hemispheres; and a soft vascular mass was now formed (the *tænia semicircularis*), in what had been a space between these and the optic chambers. Even at this, the latest period of fetal existence, there was no distinction between the cineritious and medullary portions of the brain and cerebellum, except that the exterior layer of the cerebral substance was softer, and perhaps a little more abundant in vessels than the interior portion.' The corpora striata, also, and other parts of the brain in which the gray substance is conspicuous in the adult, were not similarly distinguished in the fœtus.

By the descriptions, of which we have thus given the reader little more than a glimpse, the original simplicity and subsequent complexity of the brain, are made no less evident than they are curiously contrasted. It is scarcely to be doubted, that the development of other parts of the body is also progressive; but we imagine (though this may arise from our limited senses and powers of observation), that in other parts of the great work of the human body, the plan is more struck out at once, and less left for its completion to gradual growth and progressive development, than in the nervous system.

Life is to be sustained from the beginning; and the spinal marrow of the foetus is the same as that of perfect animals, and its volume more considerable in proportion to the brain, as the embryo is younger: but the functions of a great part of the nervous system are not required to be exercised until a later period, and the preparation of such parts is more slow and elaborate. Particular observations relating to this view of the subject are yet desirable; and especially with respect to the time and mode of formation of the portion of the nerves remote from their origins, as well as that of their junction with, or procedure from, their reputed origins,—since in monstrous births, where the imperfect arch of the spinal canal, as well as other circumstances, indicates a suspended rather than a perverted creation, the nerves have been found very distinct when there was neither brain nor spinal marrow; and in some instances infants (if they can properly be so denominated) have lived some hours, have taken food, nay, have even shewn signs of feeling, though destitute of spinal marrow and brain. As regards the anatomy of the brain itself, we should like to see the investigation of its intimate structure pursued from the point where Professor Tiedemann has concluded his labours, up to that in which all the parts of the organ may be considered as unquestionably complete. A knowledge of the manner, and the time of such completion, might direct us more wisely in our attempts to call this important part of the body into action, and lead to a more accurate acquaintance with those states of it on which depend the imperfect or irregular manifestation of the mental faculties.

The second part of the work consists, as we have already said, of a comparative view of the brain in men and animals, and contains many facts worthy of notice, of which we have it in our power to select but a few for observation.

It would appear from the history of the gradual diminution of the longitudinal canal on the posterior surface of the spinal marrow, which diminution evidently arises from the deposition, during the eighth and ninth months of foetal life, of new matter (soft, reddish, and traversed by numerous vessels) by the vessels of the pia mater, that the origin of the cortical substance of the spinal marrow is subsequent to that of the medullary fibrous substance; and, as the roots of the spinal nerves are visible at a much earlier period, (in the second and third months), it cannot be doubted that with regard to the spinal marrow, at least, the opinion of Gall, that the cortical is the matrice of the medullary matter, is incorrect. The canal, or groove above mentioned, exists during the whole of life in fishes, reptiles, and birds; and, in some

instances, is not filled up in the human subject. M. Tiedemann positively denies the existence of the two canals described by Gall as passing from the spinal marrow across the pons varolii, and into the optic chambers, which he says must have been the result of forced insufflation. Neither does he agree to the hypothesis of that writer, that the spinal marrow in man and superior animals is composed of distinct ganglia of gray substance, adherent to one another, and corresponding to the number of nerves furnished by it, to which, indeed, the history of the formation of this part is wholly opposed, the cortical substance not being seen as a part of the primordial state. At the same time, he acknowledges the correctness of Gall's observation, that the largest nerves emanate from those points of the spinal marrow which are most abundantly furnished with cortical substance, and thinks it probable that they derive an accession of energy from that circumstance,—an opinion which doubtless derives strength from the following circumstances of analogy.

‘The remarkable and regularly disposed enlargements observed immediately behind the cerebellum in the flying fish (*trigla volitans*) are the origins of the nerves destined to the digitiform prolongations peculiar to these fishes, observed in front of the ventral fins, and provided with numerous muscles, serving at the same time as organs of touch and progression; of this I have been convinced for some years. We find also in the torpedo (*raia torpedo*) two large ganglia situated behind the cerebellum, the size of which they much surpass, and from whence issue the nerves analogous to the eighth pair, which furnish a great number of branches to the electrical organs of these fishes. The *raia clavata*, *raia batis*, *raia pastinaca*, and other species of the skate, properly called, present but a very small swelling, giving origin to the eighth pair, which in these animals are only distributed to the gills. In the sheat-fish (*silurus*) the origin of the fifth pair of nerves forms a very voluminous mass, because this pair sends large branches to the long barbules which cover the superior maxilla, and to the muscles of these appendages. We find similar enlargements along the spinal marrow of most fishes. Thus, for example, in the carp, there are behind the cerebellum two swellings united together by a middle tubercle, and representing, in some degree, a second cerebellum. It is important to observe, that these enlargements are principally formed of cortical substance. We cannot then doubt that the local augmentation of the mass of the spinal marrow, by the addition of a greater quantity of this substance, is to exalt the action or activity of the nerves which emanate from these ganglia.’—P. 134.

It was remarked, a few pages back, that the pons varolii does not exist previous to the third month: up to this period, consequently, the spinal marrow is perceived to be continuous

with the *crura cerebri*, as it is in fishes, reptiles, and birds, which are destitute of this eminence.

The crossing of the pyramidal fasciculi is perceptible, M. Tiedemann says, from the fourth and fifth week of foetal life, at the point where the spinal marrow describes the curve forwards; corresponding to the inferior extremity of the pyramids. 'The two cords of the spinal marrow do not cross, but merely the middle or pyramidal fasciculi of each, which are composed of longitudinal fibres, and which give origin to the *crura cerebri*, by expanding and becoming broader.' The pyramidal eminences are not developed before the third month in the human subject, and are wanting in fishes, reptiles, and birds.

The *corpora olivaria*, the tardy development of which in man depends on the unfibrous gray substance being formed after the white, are wanting in fishes, reptiles, and birds.

It is curious to reflect how widely both the ancients and moderns have differed on the question of the relative dependence of the brain and spinal marrow on each other; to see Galen attacking the opinion of the brain being the appendage maintained by Praxagoras and Philotimus, with no less energy than has been displayed by the antagonists of M. Gall, who is well known to support the same doctrine. Great names are ranged on the opposite side; and the first impressions would, doubtless, favour the supposition that the brain was the origin, and the spinal marrow the offset or appendage; but the sober application of the unprejudiced mind to anatomical facts, and the most diligent observation of the growth of the brain, have vindicated Gall no less than Praxagoras from the charge of absurdity, and clearly demonstrated the correctness of what was at first a mere conjectural assertion, that the brain is really the production (or, as Reil expresses it, an *efflorescence*) of the upper part of the spinal marrow, and 'becomes more and more complicated as we ascend the scale from fishes up to man.'—P. 153.

M. Tiedemann's account of the formation of the cerebellum shews that it proceeds from the two restiform fasciculi, which also emanate from the spinal marrow, (p. 159); and that its ulterior development is occasioned by the secretion of new matter from the pia mater, in which way the lobes, stems, branches, ramifications, and leaflets, are produced on its surface, and the ciliary bodies within and below it, whilst the transverse grooves are formed by the extension and folding of that membrane. In the third month, the cerebellum of the human foetus has acquired the degree of evolution which is its permanent state in fishes, in many of the cartilaginous, and in

the greater part of reptiles (p. 167). In birds, as in man, the organisation of the cerebellum is simpler in the foetal state than in the adult age; and its development is more perfect in mammiferous animals than in birds, reptiles, and fishes: it is also found to be gradually more complicated in the animals of this class, and the hemispheres are found to be proportionably more voluminous, according as it is examined in the orders of the rodentia, ruminantia, solipeda, carnivora, and quadrumana.

Two observations occur here worthy of notice; that of Reil, that the number of the stems of the cerebellum, and their subdivisions, increase in proportion to the progress of the animal organisation towards perfection; and that of Malacarne, that he has found the number of the leaflets of the cerebellum in the human species bear a relation to the intellectual energy of the individual.

The small oblong eminences at the bottom of the fourth ventricle, composed of vascular unfibrous substance, giving origin to the auditory nerves, and denominated *tæniæ griseæ*, or gray bands, by the Wenzells, are observed by Tiedemann, as well as by those anatomists, to be proportionably more voluminous in most of the mammiferous animals than in man: and he prefers calling the fourth ventricle the *first* ventricle, seeing that as in the foetus its formation takes place sooner than that of the lateral ventricles, or of the septum lucidum; and that is constantly found in all animals, whilst in osseous fishes the lateral ventricles, and that of the septum in all fishes, as well as in reptiles and birds, are not to be found. This ventricle has a choroid plexus, both in man and animals, which is voluminous in the foetus, though not generally noticed in descriptions of this part.

All mammiferous animals seem to possess corpora quadrigemina; and in them, as in the human subject, these bodies give origin to the principal roots of the optic nerves. The corpora quadrigemina are covered by the cerebral hemispheres in the higher classes of mammiferous animals, as they are in the adult of the human species; but in the rodentia, as in the human foetus at the fourth or fifth month, they are not quite covered, but are seen between the cerebellum and brain. So also in the foetus, and in the lower classes of mammiferous animals, these bodies are more voluminous in proportion to the brain than in man and the higher classes, as the quadrumana and carnivora. As the structure of the brain in animals becomes more simple, the proportion which the corpora quadrigemina bear to it becomes greater; and as the foetal brain in the human subject becomes more and more developed, the proportion which

the corpora quadrigemina bear to it becomes less. Although anatomists have considered birds to be destitute of corpora quadrigemina, M. Tiedemann thinks that they really possess them, though in a somewhat different form: the arguments in support of which opinion will be found at page 193. He also considers that an analogous structure exists in reptiles and in fishes.

Notwithstanding that in man, in mammiferous animals, in birds, and in reptiles, the anterior roots of the visual nerves arise from the optic chambers, Tiedemann appears to agree with Reil and with M. Gall, that these eminences are 'enlargements of the crura cerebri, destined to afford greater energy to their nutrition, and to the formation of the mass which constitutes them; so that we should consider them as the principal focus of vitality of the crura and hemispheres of the brain.'

The pineal gland, to which so much importance has been attached, is regarded by Tiedemann as a commissure of the two optic chambers, increased by a deposition of gray vascular substance. It is not recognised before the fourth month, and concretions have never been observed in it in the foetal state, either by Tiedemann or the Wenzells. The former has never met with it in fishes: reptiles, however, possess it, as well as birds, although in them, as in the human foetus, it has no concretions. Mammiferous animals possess it, and in the ruminantia its proportion to the brain is greater than in man. Soëmmering has observed concretions in the fallow deer, and Malacarne in the goat; but they have not been found in any mammiferous animal either by the Wenzells or Tiedemann.

The corpora striata do not exist in fishes; but are found in reptiles, and are very prominent in birds, constituting the greatest part of the hemispheres of the brain, which they also do in some of the mammiferous animals. In the latter, as well as in reptiles and birds, the crura cerebri, after having quitted the optic chambers, pass into the corpora striata, where their mass is considerably increased by a mixture of gray substance.

As regards the hemispheres of the brain, it is to be observed, generally, that their mode and order of formation (which have already been spoken of), are the same in animals in the human species, except that in the former their development is arrested in different stages of its progress, whilst in the successive evolution of the human foetus those stages are over-passed. The volume and depth of the hemispheres, and the greater number of anfractuositics and convolutions distinguish the human brain from that of all

animals; and in the lower mammiferous animals there are none. In the first periods of the uterine life of the fœtus, and also in the inferior animals, the hemispheres of the brain are primarily membranous, and 'appear after the formation of the spinal marrow, crura cerebri, and their vascular enlargements, the optic chambers, and corpora striata, thus clearly proving that they are the product of an expansion of the pyramidal fasciculi.' Tiedemann, however, contradicts Gall's opinion, that the convolutions are the result of the *folding* of the original membranous hemispheres; and says that the process of *unfolding*, by which Gall attempts to prove it, always produces the rupture of the internal layer of fibres of the crura cerebri.

Fishes, reptiles, and birds, have no corpus callosum: it exists in mammiferous animals, but is very narrow in the rodentia and bat genus.

In considering the lateral ventricles, which are the result of the reflection of the membranous hemispheres inwards and backwards, we still find that what are temporary states in their formation are permanent states in different gradations of animals. Osseous fishes, which have no membranous hemispheres, have no lateral ventricles. The first animals in which they are found are the ray and shark: they are very capacious in reptiles and birds, as they are also in the fœtus of the third month; but their interior is not yet divided by cornua: and ascending in the scale, they approach nearer to the size and form which they possess in the human subject: the posterior cornua, and the posterior lobes of the brain, which are formed the latest in the fœtus, being both found in the quadrumana.

The corpora mammillaria, which in the fœtus of the third month present the form of a common mass, the division of which into two eminences is not seen until the seventh, are also seen in the carnivora: in the rodentia they form but a single mass of some size; in birds they are also simple, and small. They are not well marked in reptiles.

In the human embryo, at the second and third months, there is neither fornix nor septum lucidum, and these parts are not found in fishes, reptiles, or birds. In the carnivora and solipeda, in which the hemispheres extend farther backward than in the rodentia, the fornix is also considerably larger and longer; in the latter it resembles the state in which it is found in the fœtus at the sixth month, whilst in the carnivora, ruminantia, and solipeda, it resembles what is seen in the fœtus in the seventh and eighth month. M. Tiedemann describes the two plates of the septum lucidum as rising from

the anterior pillars of the fornix to gain the inferior surface of the corpus callosum, with which they unite; a formation which is demonstrated by the direction and radiation of the medullary fibres: and he says that its cavity communicates posteriorly in the brain of the fœtus with the third ventricle, the communication being sometimes open in the adult.

The cornu ammonis, which is one of the latest parts developed in the fœtal brain, appears also very late in the series of animals, being only observed in the mammiferous. The hippocampus minor probably does not exist in any animal; all animals, except the quadrumana, being destitute of the posterior lobes of the brain, and of the posterior cornu of the lateral ventricle. Tiedemann has not met with any observation concerning its existence in the simia.

Here we must close our notice of the work before us, which has not, we trust, proved fatiguing to those who take an interest in observing the endless variety and admirable gradation of that part of created beings of which man forms the head and the perfection. If we had not already exceeded our limits, we think it would not be difficult to deduce, from a view of the whole subject, some conclusions of great interest; but as they are, for the most part, such as must be pretty obvious to all reflecting readers, we shall leave such to make them for themselves.

Dr. Bennett has undoubtedly conferred a benefit on the profession in this country, by devoting himself to the laborious task of translating a work of which, from the descriptive character of its subject, the translation must have presented frequent difficulties. The execution of the engravings (by Lizars) leaves nothing to be desired in that department; nor should the meed of praise be withheld from the Edinburgh publisher, for putting forth the work in a form not unworthy of the reputation of its author.

III.

Transactions of the Medico-Chirurgical Society of Edinburgh. Instituted 1821. Vol. II. With Plates. 8vo. Pp. vi.—404. BLACK, Edinburgh. 1826.

'I. *Account of the Exanthematous Ophthalmia, with Observations on its treatment.* By James Wardrop, Surgeon Extraordinary to the King, &c.'—Mr. Wardrop remarks, that this ophthalmia has not only been superficially noticed,

but has generally been confounded with scrofulous inflammation. He admits, however, that persons of a scrofulous constitution are very subject to this species of ophthalmia, from the same causes which render them also particularly liable to many other diseases, although neither the character of the ophthalmia, nor the eruptions with which it is connected, are necessarily derived from a scrofulous diathesis.

‘The species of ophthalmia to which the term exanthematous is here meant strictly to apply, is so denominated from being always either accompanied or preceded by some eruptive disease. Eruptions of the scalp and discharges behind the ears, so frequent in children, are the affections with which this ophthalmia is most commonly connected. These diseases alternate with the disease of the eyes, the latter becoming affected when the eruption or discharge disappears, whilst, when either of these returns, the eyes recover. This ophthalmia also sometimes succeeds measles, scarlet fever, and other exanthematous diseases, but usually appears a considerable time after these affections have subsided, and when some eruption about the head seems more immediately connected with its appearance.

‘The *symptoms* of the exanthematous ophthalmia are very characteristic; for, besides being connected with eruptions and confined to young people, the excessive intolerance of light, the enormous secretion of tears, and the relief from forcibly squeezing the eyes, are symptoms quite peculiar. The patient can scarcely hold up his head; and if he is desired to open his eyes, he is affected exactly as if he were looking on a mirror reflecting a bright sunshine, every attempt causing a profuse gush of tears, and being instantly succeeded by a violent and involuntary squeezing of the eye-lids, and knitting of the eye-brows. He excludes all light, not only by holding down his head and squeezing the eye-lids together, but by pressing a handkerchief firmly on them, or by resting his face against a chair in some dark corner of the room. When in bed, he lies with his face buried in the pillow, a circumstance which of itself points out the peculiarity of this inflammation, and distinguishes it from all others.

‘The intolerance of light is always most severe in the morning; but in the afternoon it sometimes remits so much as to allow the patient to open his eyes, and see to a very considerable degree, for some hours. The tears, besides being of an extraordinary quantity, are of an acrid, irritating quality, producing violent paroxysms of sneezing, scalding the cheeks, the ælæ of the nose, and the lips, so that these become inflamed and swelled, and sometimes covered with pustules and cutaneous ulcerations. The eye-lids are also swelled, and have turgid veins on the surface. On trying to force them open, a torrent of tears gushes out, and it is not without occasioning great pain, that a small portion of the globe can be exposed. An attempt to get a view of the cornea gives great pain; and it is almost impossible to succeed. The palpebræ, as well as the sclerotic

conjunctiva, are but slightly reddened; the vessels appearing as a few distinct trunks, instead of the diffused redness observed in many other inflammations. In general, both eyes are attacked with this disease, though one more violently than the other.

‘Along with these local symptoms there is always more or less of constitutional excitement. The pulse is frequent and agitated, the tongue is particularly white, the primæ viæ greatly disordered, the abdomen tumid, the skin sallow, and there is great loss of flesh. . . .’

‘When the eruption on the scalp recurs, or the discharge behind the ears increases, then the inflammation of the eyes generally subsides, and the cornea can be examined. Besides a greater or less degree of fulness of the vessels of the sclerotic and palpebral conjunctiva, there will generally be perceived one or more specks on the cornea, and even sometimes a distinct ulcer. These, however, are trifling; and indeed there is nothing more remarkable in the history of this disease than the slight injury which the organ sustains after being long and severely affected.’

We may remark that many of our best authors, and particularly Hoffmann, have pointed out the connexion of ophthalmia with acute exanthematous diseases and chronic eruptions of the skin; and have even instanced a greater number of eruptive diseases, which are occasionally connected with the supervention and disappearance of ophthalmia, than are particularised by Mr. Wardrop. They have likewise pointed out that inflammation of the eye, thus connected with diseases of the skin, requires a modified treatment, and is more dependant upon internal and constitutional remedies for its removal than the other forms of ophthalmia; but they have failed in placing it in so clear a light as a distinct variety as he has done. In this alone consists Mr. Wardrop’s credit, for as respects the treatment of this variety of ophthalmia, we cannot perceive that he has made any additions or improvements. We have had numerous opportunities, at the infirmary for children, of observing the connexion existing between ophthalmia and the exanthematous fevers, the different forms of the tinea capitis, and the other chronic eruptions so frequently observed amongst the poor of the metropolis, and hence we are enabled to say that Mr. Wardrop’s description is perfectly applicable to many of such cases, but not to all of them. As regards the varieties of ophthalmia which are met with as the sequelæ of small pox, measles, and scarlatina, we are more disposed to consider them in the manner they have been already viewed and arranged by the modern German writers on the diseases of the eye, than to believe that ophthalmia, connected with eruptive diseases, always puts on the same

precise and distinctive characters, no matter whether the eruption be acute or chronic, symptomatic or specific. Instead, therefore, of viewing ophthalmia, when connected with eruptive disorders, as displaying the same uniform characters, without regard to the nature of the eruption with which it has relation, as Mr. Wardrop has done, we consider that it varies according to the species of eruption, and that the morbillous or scarlatinous ophthalmia is specifically different from the ophthalmia that is produced by tinea capitis, scabies, &c., as respects not only the precise pathological condition, the accompanying constitutional disturbance, the duration and terminations of the disorder, but moreover as regards the particular means required for its removal.

In place, therefore, of recommending the same treatment for all cases of the exanthematous ophthalmia indiscriminately, without regard to the eruption with which it is connected, we have always endeavoured, as far as we have been able, to appropriate the remedies to the disease with which it has relation, depending, however, chiefly upon internal medicines for its removal. In very few cases, indeed, have we found it necessary to employ any other local means beyond the frequent ablution of the eyes in pure warm water. In the majority of cases, the treatment recommended by Mr. Wardrop is the same as that which we have been in the habit of ordering, with this difference, that we have generally found larger doses of the purgatives to be requisite than those mentioned by him. The necessity of adopting alterative and tonic medicines, after the deranged secretions have been removed, is sufficiently obvious to require illustration.

As we have given fully the author's description of the exanthematous ophthalmia, we shall give his remarks on the treatment.

'The general treatment which is commonly necessary for the cure of the exanthematous ophthalmia, consists of first completely evacuating the bowels, and afterwards regulating them; of giving alterative and tonic remedies; and of producing an artificial discharge. Even when this ophthalmia appears in a feeble emaciated child, it will usually be found that, by the exhibition of purgatives, feculent matter, both unnatural in quantity, and of a bad quality, will be evacuated, and until its evacuation has been effected, other remedies avail little. One grain of calomel, with three of rhubarb, given at bed-time, and repeated every other night, four or five times, whilst jalap or senna is taken the alternate mornings, will generally answer the purpose of bringing away the feculent contents of the primæ viæ; but whenever the quality of the evacuations improves, these medicines must be given with caution; and one dose of the rhubarb with calomel, given only once in six or eight days, and the

senna or jalap occasionally, will be sufficient; for though the greatest benefit will be obtained by evacuating the bowels, violent purging will be found equally prejudicial. When the treatment has been so far advanced that only one dose of calomel appears necessary in six or eight days, then at this time tonic and stomachic medicines may be advantageously administered. Of these I have found none so generally useful as the carbonates of soda or potass, either given singly, or combined with rhubarb and the bitter infusions. In some instances, the mineral acids have been useful, and also the preparations of iron. Whilst using either of these remedies, much attention is also due to the food and habits of life. All wines and malt liquors are particularly hurtful, and the patient should live chiefly on farinaceous vegetables, with but a small proportion of animal food.' 'The hair ought to be cut very short, and the greatest advantage will be found from sponging the head and neck with water every morning.'

In some cases of this form of ophthalmia, we may have very advantageously commenced the treatment with the exhibition of an emetic, followed by purgatives and the treatment now mentioned. When the ophthalmia is connected with porriginous affections, after the use of purgatives, sometimes having premised an emetic, we prefer the adoption of those alteratives into the composition of which the hydrargyrum cum creta and sub-carbonates of soda or potash enter. When the ophthalmia occurs as the sequela of scarlatina or measles, purgatives may be combined with camphor, and diaphoretics ought to be prescribed in the intervals between their exhibition. It is most important to bring about a healthy state of the alvine evacuations, to keep up a gentle moisture on the skin, and to promote the urinary secretion. As soon as the alvine functions are corrected, tonics may be adopted, and we have then given the muriatic acid in conjunction with them most advantageously. In such cases change of air early in the disease ought not to be overlooked.

The next remedy on which the author insists is of much importance, and is one which ought never to be neglected, when we find that the symptoms fail of making that improvement which we are authorised to expect from the means already pointed out.

'Perhaps the next measure which ought to be employed is the application of a succession of small blisters behind the ears; or when the skin is unusually tender and prone to disease in that part, it is preferable to put a large one on the nape of the neck. Should there be, from any cause, an objection to the use of blisters, equal advantage may perhaps be derived from the ointment composed of the tartrate of antimony, applied so as to produce a plentiful crop of pustules upon the scalp. I am in the habit of employing a suc-

cession of blisters in place of keeping one constantly open, but each mode may have its advantages, and one may occasionally be preferable to the other.

‘ In this stage of the treatment the intolerance of light and excessive lachrymation become subdued, so that the patient is now enabled to open his eyes, particularly in a moderate light. Frequently, however, the eyelids still remain tumefied, and the vessels of the palpebral conjunctiva, though not much increased, continue enlarged and distended with blood. If a superficial incision, or rather a very slight scratch be made, with a sharp edged instrument, or common wedge-shaped scarificator, across these vessels, the under eye-lid being previously completely everted and pressed on the edge of the orbit, an astonishing quantity of blood will sometimes flow, and the relief obtained from this simple operation is often very remarkable.’

Before we relinquish this subject, we may state that we would have been gratified had the author turned his attention to the relation which sometimes exists between the varieties of ophthalmia—for it is not a single variety, as the author has it, which may be denominated the exanthematous—and difficult dentition. When ophthalmia occurs at either the first or second periods of dentition, the practitioner ought never to omit the examination of the mouth; the gums should be early and freely scarified, and every source of irritation in that quarter removed. The use of emetics is also entirely overlooked by Mr. Wardrop, as well as that of the hydrargyrum cum creta, a medicine particularly beneficial as an alterative, especially when exhibited as already alluded to. As the exanthematous forms of ophthalmia occur so frequently in large towns, we are much surprised that this circumstance, independently of other obvious considerations, had not suggested to Mr. W. the propriety of an early change of air, particularly to the sea side. Such change is not necessary only as preventive of a recurrence, but also as a means of cure. The use of the tartarised antimonial ointment seems to us preferable to blisters; we have, however, employed both very frequently, although not at the same time, nor in the same patient. The former of the two we have always ordered to be applied to the nape of the neck, and have never been satisfied with aught less than a very copious eruption of pustules. As to the points noticed by the author, we perfectly agree with him; and we only notice those matters which he has neglected to touch upon, in order to show that surgeons—surgeons denominating themselves such, *par excellence*,—are not infallible, on subjects even within their own province. They have, at least many of them have, lately so frequently taken occasion to insult the science of the physician on the one hand, and that of the

general practitioner on the other, that we feel more than usually disposed to examine the grounds on which their own pretensions are founded. Amongst these, however, we must be considered as by no means including our very excellent and eminent author. There are indeed few surgeons, whether as respects the excellence of his education, and the general range of his professional and scientific attainments, whose just pretensions are equal to his; and there is certainly no one who is less disposed to impugn the just pretensions of, or to interfere with the physician. But we have recently seen the published lectures of some and speeches of others, and even heard the declamations of not a few, aimed at impressing upon the unthinking and ignorant mind that no one can be equally learned, instructed, or in any way acquainted with the functions and disorders of the human frame, with the surgeon. Such assertions to be sure would be only amusing, and would fail of exciting even a deserved disgust, if addressed only to those against whom they are directed; but unfortunately there are many who can know no better on the subject than they are told, and on whom such assertions are impressed for interested purposes. *

II. *Observations on the Nature, Causes, and Treatment of Beriberi.* By William Hamilton, Esq., Surgeon, &c.

‘ This very singular disease, so far as I have been able to learn, appears to be principally, I may say almost entirely, confined to the island of Ceylon, to the Malabar coast, and to that tract of country reaching from Madras as far north as Ganjam, in no part extending inland more than forty miles, forming what is called the Northern Division of the Madras settlement. It is most prevalent during the decline of one monsoon and setting in of another, when the atmosphere is completely loaded with cold, raw, damp vapours, and the vicissitudes of temperature are greater than at any other period of the year; and the instances are comparatively rare, where it has been found to occur at a distance from the sea, exceeding sixty or seventy miles. A residence for some time (gene-

* See certain published introductory lectures to surgery, in which physicians are insulted as a body. These lectures fail of being instructive; the impotence of their spleen renders them, however, extremely amusing to physicians particularly. We may remark, as a matter of notoriety, that whilst the surgical lecturers and surgeons of the metropolis usurp the practice of the physician, without a particle of medical education, generally speaking, excepting merely *surgical* anatomy,—for in *medical* or general anatomy they are utterly deficient,—they take every opportunity, in their lectures and otherwise, to depreciate the professional attainments of physicians, who are much above retaliating. The consequence of this is, that the study of medical science and practice is entirely neglected by the student, although medical cases will form nine-tenths of his future practice.

rally some months), on a station where the disease prevails, seems essential for its production.'

'Individuals of very different constitution and habit of body, seem liable to be affected with this complaint; but such as lead a sedentary and debauched life, and are much exposed to vicissitudes of weather, and sudden changes of temperature, are unquestionably those most subject to its attacks; and a person having once suffered from it appears more liable to a future attack than another. The old and infirm, if exposed to the causes giving rise to the disease, are more liable to its attacks than the young and active. Women, and more especially children, from being less exposed than men to these causes, are much less liable to be affected by it.'

'In the second case which I had an opportunity of attending, the disease from the time I first saw it appeared under its more aggravating form; the symptoms were as follow:—great debility, with difficulty of respiration; a sense of weight and oppression at the lower end of the sternum; and an almost paralytic state of the thighs and legs, which, soon after the commencement of the attack, became cedematous, as did also the face, and indeed the greater part of the body, with a general sense of coldness over the surface; pulse 120, small, feeble, and intermitting. All these symptoms went on increasing until the death of the patient, which took place within forty-eight hours from the time that I first visited him. A short time previous to his death, he was seized with a violent fit of vomiting, spasms of the abdominal muscles, and increased dyspnoea, which carried him off.'

'*Sectio cadaveris.*—Upon removing the skull-cap, I found upwards of an ounce of serum effused between the pia mater and tunica arachnoidea; and in two or three different places there appeared dark, red coloured patches, one of which was exceedingly vascular, and extended into the substance of the brain, to the depth of from a quarter to half an inch. There was likewise found considerable effusion in all the ventricles except the fourth. In the base of the cranium, upon the brain being removed, there appeared upwards of four ounces of fluid tinged with blood.'

'The lungs were very much loaded with dark-coloured blood, and in both cavities of the thorax there was found extensive effusion. The heart was of a healthy appearance; nor did the pericardium seem to contain a much greater quantity of fluid than usual; both on its external surface, however, and internally, there existed very evident marks of inflammation. The diaphragm, particularly toward the right side, appeared considerably inflamed. The stomach was of a healthy appearance, and contained about six ounces of a dark brown liquid.

'The liver was very evidently larger than natural, and appeared even still more loaded than the lungs. On cutting through its substance, the blood, from different points, trickled out in a continued stream; and indeed all, even the most minute vessels, seemed completely gorged, as were also those of the mesentery and

pancreas. In several places on the surface of the intestines, there appeared a sort of efflorescence; but upon the whole they presented nothing remarkable. On examining the spinal marrow, the same evident marks of congestion were found to exist, more particularly in the dorsal region. From three to four pounds of fluid were found in the cavity of the abdomen; and in the cellular texture, almost all over the body, there was very extensive effusion. No other deviation from the healthy appearance of the parts was found.'

From the evident congestion found upon dissection in the brain, lungs, and liver, Mr. Hamilton was induced to employ large and repeated blood-lettings, in the three cases which subsequently came under his care. These cases recovered. After copious blood-lettings, he had recourse to mercury, with the intention of bringing the patient speedily and effectually under its influence.

' Soon after the second bleeding, I directed twenty grains of calomel, with thirty drops of laudanum, to be given, and had the patient laid upon the frame of a common sea-cot, having an open ratan bottom, under each end of which was placed a block of wood, for the purpose of raising it from the ground. A blanket, having a hole cut sufficiently large for allowing the head to protrude, was now thrown over all, and brought close down to the ground. Two crucibles, containing ignited charcoal, were then placed underneath, and the whole surface of the body was freely exposed to the fumes of the hydrargyri oxydum cinereum, some of which was from time to time thrown into the crucibles. This I continued for upwards of half-an-hour, when the patient feeling faint, the crucibles were removed, and the body enveloped with the blanket which covered it during the fumigation. An hour and ten minutes having elapsed from the time the calomel was given, the dose was repeated, with the same quantity of laudanum as before; soon after which he fell into a sound sleep, in which state he continued for upwards of three hours. Upon his awaking, I found him in a very copious perspiration; his pulse increased in strength, and the dyspnœa not nearly so troublesome. I now again repeated the calomel, with six grains of gamboge, for the purpose of acting on the bowels, and omitted the laudanum; had also the crucibles replaced, and the body again exposed to the fumes of the hydrargyri oxydum cinereum, which, together with the scruple doses of calomel, and friction over the surface of the abdomen and thighs, with the unguentum hydrargyri fortius, and liquor ammoniæ, was repeated every three to four hours, until ptyalism was fully established. This, notwithstanding the active means employed, was not effected for more than forty hours. Every unfavourable symptom then speedily disappeared, and the patient's principal complaint was the soreness of his mouth. The particulars of this case, which are nearly similar to that of two others which fell under my care, in which the same mode of treatment proved equally successful, I beg leave to subjoin, as

copied from my notes taken at the time. I may here add, that, in one of the cases, there was from the first violent and continued vomiting, which soon, however, yielded to large and repeated doses of calomel and laudanum, together with the application of a strong sinapism, at from 150° to 160° of Fahr., to the region of the stomach, which I have found singularly successful in speedily allaying the violent gastric irritability in cases of bilious remittent fever and cholera, where the calomel and laudanum alone had completely failed of success.

In addition to these cases, Mr. Hamilton refers to cases treated by Mr. Marshal and Dr. Rogers, in which blood-letting proved equally beneficial.

V. Observations on Chronic Inflammation of the Iris. By Alexander Watson, Esq., &c., F.R.C. Surg. Ed.

‘ In this disease, the first change observed in the eye is a partial irregularity of the pupillar margin of the iris, at one or more points. This irregularity of the margin of the iris alters, of course, the form as well as the size of the pupil. In some cases, it is more dilated, and in others more contracted than natural. The iris loses its proper colour, and its pupillar margin becomes partially or wholly drawn backwards, in consequence of its partial or complete adhesion to the capsule of the crystalline lens. The motions of the pupil at the same time become impeded, in proportion to the number and extent of the adhesions. In some cases, the adhesion of the iris takes place to a considerable extent at one point; in other cases, the adhesion takes place to a smaller extent at several points, which, in the progress of the affection, by extending, become one continued adhesion, involving the greater part, or the whole of the pupil. That part of the iris between the adhesion and the ciliary margin assumes a convex form, by projecting to a greater degree at this part, towards the cornea, than it does in its healthy state. By this projection, the size of the anterior chamber of the aqueous humour is diminished, and that of the posterior chamber is proportionably increased.

‘ Where the iris adheres to the capsule of the lens, an effusion of lymph may, in general, be observed, forming the connecting medium. The capsule of the lens generally becomes opaque; and frequently small portions of lymph, and sometimes of pigment, from the posterior surface of the iris, can be seen upon this capsule. In some cases, a deposition of lymph takes place upon the inner surface of the cornea, occasioning a dimness and opacity of this part. Vision gradually becomes impaired as the disease advances, till it is quite destroyed. And this last symptom (impaired vision) is commonly the only one by which the patient is conscious that mischief is going on in the eye.

‘ The progress of chronic inflammation of the iris is remarkably slow and insidious, having been reported, in several cases, to have continued for many years gradually destroying the sight; and that,

too, notwithstanding the employment of various remedies to arrest its progress. In some cases it has appeared to take place after an attack of acute inflammation of the eye, and in others after rheumatic complaints.

‘Chronic inflammation of the iris is not, in general, attended with either pain, intolerance of light, external redness, or any other symptom which marks the presence of acute inflammation. In two cases, however, where the patients were young women of irritable constitutions, the eyes, both of which were affected in each of the cases, were attacked, at different times, in the progress of the disease, with acute inflammation in a slight degree. These states of excitement were marked by a slight redness upon the white part of the eyeball, which took place every three or four days. This state of acute inflammation continued only for about one day at each attack, when it again subsided.

‘In several cases the cornea became more prominent than natural, approaching to the state called hydrophthalmia; and, consequently, the focus of the vision was so altered, that sight became confused and indistinct.’

The author offers no remarks respecting the treatment of chronic iritis.

X. Cases illustrating the contagious Nature of Erysipelas, and its Connexion with a severe Affection of the Throat. By John Stevenson, M.D., &c. We give the whole of this interesting paper in the words of the author, as it is so much condensed as to preclude farther abridgment.

‘I enclose a short abstract of some of the cases which, in our late conversation, I mentioned to have occurred in my practice here, tending to prove the contagious nature of the erysipelas, and to shew its connexion with a peculiar and severe affection of the throat, of which I do not recollect to have met with any description. This affection of the throat occurred so frequently in persons who had been much with erysipelatous patients, that I could not doubt their identity; and I came finally to the conclusion, that it was in reality erysipelas of the fauces, spreading occasionally to the adjacent parts in different directions. The febrile symptoms by which it was ushered in were generally severe, even in the milder cases: very full, and frequent pulse; severe pain of head and back; restlessness, and great heat of the surface. The period at which the affection of the throat came on, after the accession of the fever, varied from the second to the sixth day. It commonly began with a red or purplish blush, more or less extensive, over the velum pendulum and uvula, accompanied with very little tumefaction, but with considerable pain in swallowing; often, after a few days, excoriation of the inflamed surface followed, with superficial ulceration, which at times soon healed, but at other times spread and discharged a good deal of purulent matter. In many cases, the disease terminated without extending farther than the parts

mentioned ; but in a few it spread to the larynx, producing a state of respiration very like that of idiopathic croup ; in others, it extended to the pharynx and œsophagus. When the last became affected, fluids and even solids could be partially swallowed without much apparent difficulty ; but, after a few seconds, pain was felt in the course of the gullet, an inverted action began, and they were wholly or partially returned to the mouth. In some protracted cases, glandular swellings appeared in the neck, which suppurated externally.

‘ This disease was readily distinguishable from cynanche tonsillar, by the want of swelling, by the redness being more diffused, and by the pyrexia being generally greater than could have been expected from the degree of local affection. From croup, it was distinguishable by the larynx being affected in a small proportion only of the cases, by the inflammation not commencing there, at least in any case which came under my observation, and by the age of the patients. From scarlatina, it was distinguishable by the absence of cutaneous eruption, and by its attacking persons who had already had that disease.

‘ Copious and repeated bleeding, with brisk purgatives ; and, in every case where the throat was severely affected, the application of a large number of leeches to the neck appeared to me to be the mode of treatment which was most successful. All the cases that came under my management, both of the common erysipelas, and of the affection of the throat, were treated in this manner. I have stated the event of all those detailed, and it affords a fair specimen of the general results of the cases which came under my care.

‘ I have been anxious to condense this communication as much as possible. I have selected such cases only as appeared to illustrate the connexion between the two disorders in the most remarkable manner, though a great many more occurred in my practice, tending to support the same conclusion, but not perhaps so strikingly. Of those cases which occurred among my own relations, you will observe that Mrs. S. jun. was seized precisely at the time I was most engaged in attending patients labouring under this disease. In her case, as in many others, external erysipelas supervened to the sore throat ; but I saw no instance of the reverse. In several cases, when ulceration did not take place, the redness speedily disappeared, seeming, as it spread to the contiguous parts, to leave those originally affected. This was remarkably exemplified in J. H. (No. 2.) No redness could be perceived on looking into his throat after the second or third day, though the disease lasted several weeks. No person, in seeing M. M., (No. 3), or R. P., (No. 8), could have given the complaint any other name than *cynanche laryngea* ; and yet, taking all the circumstances into consideration, scarcely a doubt can exist of the inflammation in these cases being of the same kind with that in the others, only affecting parts, the structure and functions of which were different.

‘ I am, &c.

‘ JOHN STEVENSON, M.D.

' CASE 1. Mrs. H., October 26, 1821.—Erysipelas of face and head; severe case; high fever and delirium; no affection of the throat.—*Recovered*.

' 2. J. H., son to No. 1, November 7, 1821.—Throat affected in the manner described; tedious case; inflammation spread successively to the pharynx and œsophagus; slight erysipelas of the face came on during the second week, but soon subsided; but the affection of the throat continued a considerable time afterwards.—*Recovered*.

' 3. M. M., ætat. fifty, attended on No. 1, November 23, 1821.—Severe affection of the throat, which soon spread to the larynx; the danger appeared imminent; the respiration resembling that of severe idiopathic croup; no external erysipelas.—*Recovered*.

' 4. H. H., daughter to No. 1, November 25.—Considerable pyrexia; slight affection of the throat, which did not spread, nor ulcerate; no external erysipelas; soon got well.

' 5. J. S., January 18, 1822.—Throat affected severely, very high fever; had visited several times a neighbour who died of erysipelas of face and head; larynx a little affected; erysipelas of the face of a mild description, came on about the 8th day, when the other complaint was declining.—*Recovered*.

' 6. Mrs. N. frequently visited No. 5, January 25, 1822.—Severe and tedious case of erysipelas of face and head, with a high fever and delirium; throat not affected.—*Recovered*.

' 7. Mrs. H., February 5, 1822, frequently visited No. 6.—Affection of the throat as described; tedious case, but not severe; lasted five or six weeks; no external erysipelas.—*Recovered*.

' 8. R. F., ætat. 60, frequently visited No. 5, who wrought in the same tanyard with him, February 5, 1822.—Affection of the throat as above, appeared slight at first, but spread to the larynx on the third day, and he died on the fifth, with all the appearances of a child in severe croup.

' 9. — S., attended on No. 7, February 15.—Severe affection of throat, but of short duration; no external erysipelas.—*Recovered*.

' As soon as this patient was taken ill, she went home to her parents, who resided at some distance. I afterwards learnt that they were very soon seized successively with similar complaints, and that the mother died a few days after being attacked.

' 10. M. S. attended on No. 7., after S.'s seizure, February 25, 1822.—Severe erysipelas of one arm; high fever and delirium; no affection of the throat.—*Recovered*.

' 11. Mrs. T., August 12, 1822.—Severe erysipelas of arm and shoulder, terminating in extensive suppuration of the whole cellular membrane, and death.

' 12. P. K., son-in-law to No. 11, August 30, 1822.—Severe affection of the throat, chiefly of the pharynx and œsophagus.—*Recovered*.

' 13. Mrs. R., sister to No. 11, September 17, 1822.—Affection of the throat, chiefly of the pharynx; tedious, but not severe.—*Recovered*.

' 14. J. R., son to No. 13, November 1, 1822.—Severe case of erysipelas of face and head; very high fever and delirium; no sore throat.—*Recovered.*

' 15. December 1, 1822.—I was called to W. R., father of the last patient, and found him affected with a sore throat, exactly similar to that of the others. He had been seized with a rigour a few days before, and the throat was felt painful next day. The febrile symptoms less severe than in the generality of cases.

' The following cases occurred among my own relations:

' 16. Mrs. S., jun., February 6, 1822.—Rigour; intense pain of head and loins; very high fever. Second day, severe sore throat, with total inability to swallow. Seventh day, erysipelas of the face, gradually spreading over the whole head; considerable purulent discharge from the throat. Fifteenth day, critical sweat.—*Recovered.*

' This was the severest case I had an opportunity to see of the external erysipelas supervening to the sore throat. The erysipelas in most other cases was mild, and not attended with much burning pain; generally commencing when the fever began to subside.

' 17. M. S. attended on No. 16, during the first week of her illness, February 14, 1822.—Rigour; high fever; delirium and stupor from the commencement; erysipelas of face, head, neck, and shoulders, extending down over part of the trunk; no sore throat. Died on the 13th day.

' 18. C. S. much with both Nos. 16 and 17, March 2, 1822.—No rigour; severe pain of loins; no head-ach; very high fever for a week; pulse after that period continued about 105 or 110 beats in the minute, till the disease terminated; sore throat, as described, began on the fifth day, ulcerated, and discharged pus for several weeks; a blister, applied to the neck about the seventeenth day, produced erysipelatous inflammation over the whole thorax, but healed readily; disease lasted near nine weeks.—*Recovered.*

' 19. Mrs. S., sen., constantly with the above, April 3, 1822.—Severe case of erysipelas of face and head; high fever, delirium, and stupor; no sore throat; crisis on the 10th day.—*Recovered.*

' 20. Mrs. S. much with all the above, April 10, 1822.—Very high fever; severe sore throat; larynx became affected on the 5th day; no external erysipelas. The disease in this case appeared to be cut short by large bleeding. After two copious venesections, twenty leeches were applied round the neck, on the appearance of the laryngeal symptoms, and bled so long and violently as to excite considerable alarm. She was much weakened, but the disease subsided immediately afterwards.

' 21. M. G., much with Nos. 2 and 3, April 10, 1822.—High fever for a few days, with slight affection of the throat.—*Recovered.*

' *N. B.*—When this paper was read, (July 7, 1824), several members of the society mentioned having observed similar facts within the last few years, although the succession of cases, where communication with persons already affected had taken place, had not been traced to so great an extent. Several members had seen

the affection of the throat here described, supervene on the erysipelas, even in its later stages. In three cases, mentioned by Dr. Abercrombie, Dr. Hay, and Mr. Bryce, the inflammation appeared to have spread from the fauces to the external surface, by the membrane lining the internal nares, the part of the skin first affected having been, in the first two cases, at the orifice of the nostrils, and in the last at the orifice of one of the lachrymal ducts.'

XII. Case of Carditis, attended by unusual Symptoms ; with an Account of the Appearances on Dissection, Death having occurred from another Cause, after the Cure of the original Disease. By John Gairdner, M.D., Fellow of the Royal College of Surgeons. This case is altogether so interesting, that we submit it without curtailment to our readers.

'Mr. G., aged about twenty-eight or twenty-nine, a medical gentleman, and formerly a pupil of mine, was suddenly seized on the night of Sunday the 16th March, 1823, with a violent palpitation at the heart. I was instantly sent for; but before I could arrive at his house, which was a little way out of town, nearly an hour might have elapsed. The action of the heart had by this time greatly subsided; but was still preternaturally violent and rapid. The pulsations were upwards of 120 in the minute. He complained, besides, of a sensation of throbbing in his temples, and of headach. He stated, that for some time after the commencement of the attack, his heart beat so violently as to be distinctly audible; and at the same time with such tremendous rapidity, that he felt as if he should have died before professional assistance could be procured; that this violent action abated gradually, and was succeeded by the sensations already mentioned; and that he still felt persuaded that the slightest exertion would recal the dreadful feelings he had before experienced. So strong was this persuasion, that he would not stir from the position in which he was laid, nor make the smallest effort of any description.

'He had been in England some weeks before, and had there experienced an attack, similar in character, but much less formidable in degree, which had yielded without any very active treatment having been resorted to.

'I immediately abstracted about thirty ounces of blood from a vein in the arm. The pulse became less frequent and softer during the operation; and when it was over he felt much relieved, both from the throbbing at his heart, and the uneasiness in his head. His pulse came down while I was with him to 108: the blood presented a strong buffy coat. I recommended a saline purgative, and quitted him for the night.

'The following day (17th), he lay perfectly easy in bed, without palpitation, and with a calm pulse, not much above 100, but quite unable to exert himself even for the purpose of changing his position in bed. In the evening, about nine o'clock, a second fit of palpitation occurred, which followed precisely the same course with the first; abated considerably before it was possible for me to reach

him, and was succeeded, as before, by a distressing sensation of throbbing in the temples. I bled him a second time, as profusely as at first; and he again expressed a conviction, founded on the immediate relief he experienced, that the bleeding had been of essential service to him. The blood exhibited the buffy coat as formerly. The saline purgative was ordered to be repeated in the morning.

Notwithstanding these large bleedings, he had a third attack in the evening of the following day (18th). This attack was not quite so violent as the two former, though still so much so as to produce in his own mind the same impression that it might have proved instantly fatal; and the same apprehension, after it was over, of the possible consequences of its recurrence. Participating in this apprehension, and encouraged by the relief which the two former bleedings had afforded, I ventured on another equally copious. The blood was as buffy as before. In the night, while his attendants were turning him on his side in bed, the bandage shifted, and, before this was observed, he had lost several ounces more. This, like the other bleedings, produced great immediate relief, and was followed by a longer exemption from palpitation. On Wednesday (19th), Dr. Thomson was, at my desire, conjoined with me in the charge of the case; the course of which he witnessed in all its subsequent stages. The patient having complained much of the uneasiness of his head in the last attack, Dr. T. advised the detraction of blood from the temples by leeches, in case of a recurrence of the symptoms, instead of resorting again to general bleeding. The palpitation kept off till Thursday evening (20th), which was twice as long as either of the two former intervals. It then returned in the same sudden manner, but was much less violent. He was much relieved by the application of the leeches. He had one or two slighter attacks after this time, which did not seem to demand any very active measures.

His chief distress now proceeded from his inability for exertion. When he lay perfectly still in bed he felt quite easy, and had a soft, natural pulse; but if he attempted to raise his body, even to the position of sitting in bed, his pulse instantly became very frequent, and his sensations were such as plainly announced to him the danger of continuing the experiment. It was some time, indeed, before he even made the attempt; but I had various opportunities afterwards, at different dates, of ascertaining the remarkable effect produced upon his circulation by changes of posture. I have found him reclining in bed, with his pulse as usual, quite natural; the next moment, after he had slid, in the gentlest manner, over the edge of his bed, so as to rest his feet on the ground, I have found it at 130; again, after he had resumed his original position, I have found it almost immediately down to 80 or 76.

From this singular state he recovered slowly, but progressively. He rode out frequently in a carriage, in which he reclined on a couch; and, by the end of the summer season, he was able to sit upright, and to walk without assistance. But a new train of symp-

toms now arrested my particular attention. Soon after the commencement of his illness, I observed that he coughed occasionally. He had been liable, long before, to protracted colds, for some of which I had prescribed; and they had always yielded to medical treatment. On this occasion his cough was so slight at first as to arrest no particular attention, till it became increased, by an accidental exposure in the month of July. He expectorated a little, and became emaciated. In short, we suspected incipient phthisis; and the result justified our unfavourable anticipations. It is sufficient to say, that appearances became daily less equivocal, and that the case terminated fatally on the 7th November.

‘On *dissection*, the lungs were found tuberculated throughout, on both sides. The tubercles had passed into suppuration in different places. There was one abscess, of immense size, in the left lung. On the right side, on which he had lain for some time before his death, the lung was œdematous.

‘Near to the apex of the heart we found a layer of dense organised lymph, closely investing a part of the parietes of both ventricles. On attempting to separate a portion of this layer, it was found to be firmly united to the substance of the organ, dipping between its muscular fibres, in the form of dense cellular tissue. It was obviously the result of previous inflammatory action, which had subsisted nearly eight months before, when he had the violent fits of palpitation. There was no adhesion of the heart to the pericardium. The valves, and every other part of the heart, as well as the great arteries, were perfectly healthy.

‘The above is one of a class of cases which have always appeared to me to be full of interest,—I mean those which afford opportunities for the anatomical investigation of organic changes, not connected with the immediate cause of the death of the individual. The discovery of the ravages committed by the fatal disease may often be the least interesting and least useful part of the information to be acquired by a dissection. The object of all pathological anatomy is to increase our power of distinguishing and of curing diseases, by correcting our erroneous impressions, and converting our *correct* speculations into well ascertained facts; and surely this object is not of *less* value in relation to cases which, like the above, are capable of being benefited by the interference of art, than in those more common subjects of pathological research, which appear destined for ever to baffle the most skilful efforts of the physician. Even these last may be examined with most hope of instruction, when the death of the individual, from accident, or from some other disease, permits us to trace them in the earlier stages of their progress.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ORIGINAL PAPERS.

I. *An Attempt to prove that the Heart is the sole Power concerned in the Circulation of the Blood.* By FREDERICK BAILEY, M.B., &c.

Of all the sciences that have attracted the attention of man, there are none perhaps in which he is so deeply interested as physiology. But it is a notorious, and, at the same time, a humiliating consideration, that a science thus essential to his welfare should have been cultivated with less success than any other branch of natural knowledge. Even the great and leading function of the living body, from which all the rest emanate, has hitherto received but a very imperfect explanation. I allude to the causes by which the blood is moved and circulated. In what estimation would the mechanic be held, who should presume to rectify the irregularities of a most complicated machine, without so much as understanding the principle which pervades and actuates all its movements? and, however mortifying the reflection, such assuredly must in some measure be the situation of every medical practitioner so long as he shall remain ignorant of the nature of the circulating power.

Impressed by this sentiment, I have ventured to collect a few thoughts upon a subject which has often undergone much laborious but inconclusive discussion. Scarcely can I expect that a better fortune will attend my feeble endeavour; but, howsoever this may be, I shall at least have the satisfaction to reflect, that I have been prompted to it by the hope of rendering some small service to that profession of which I have the honour to belong.

The illustrious Harvey, by whose industry and penetration the course of the blood was first fully and satisfactorily explained, seems not to have applied himself to the investigation of the causes by which this fluid is set in motion. It is indeed probable, he was deterred from such an undertaking by the animosities which his previous departure from received opinions had so plentifully awarded him. Scarcely, however, can it be doubted, from numerous expressions to be found in the writings of this eminent physiologist, that he regarded the heart as the sole agent in the business of circulation.* This opinion received the sanction of succeeding writers, until the commencement of the last century, when, upon the authority of certain experiments at that time performed, it was no longer

* 'Vis et impulsio sanguinis solum à corde.'—Vide HARV. *de Motu Cordis*, cap. xii.

considered defensible. The tendency of the experiments alluded to, was to shew that the heart possessed not sufficient power, alone and of itself, to carry on the circulation. The supposition, therefore, of other powers became inevitable; and where could such powers be so reasonably looked for as in the blood vessels themselves? After this manner reasoned the candid and ingenious Dr. Whytt; and as he has managed the argument with greater ability than any other author, it may not be improper to give some account of it here.

Now, the grand principle with which this excellent physiologist sets out, and which he derived chiefly from the experiments of Dr. Hales, is, that the force of the blood's motion in the aorta is such as to sustain a perpendicular column of that fluid, of the height of 90 inches. If, then, the diameter of a red globule of blood be fixed at the $\frac{1}{2000}$ th part of an inch, and a capillary artery, just capacious enough to admit it, be supposed to spring immediately from the aorta, the contents of such a vessel will be a measure of the force with which a single red globule is impelled from the heart. Now, the diameter of this vessel being the $\frac{1}{2000}$ th part of an inch, the area of its transverse section will be .000000196; and this multiplied by 90, will give its fluid content, which is .0000176 parts of a cubic inch, or about the $\frac{1}{214}$ th part of a grain. But calling to mind that the arteries undergo many subdivisions before they become capillary; and supposing, at the same time, that the ratios of the areas of the transverse sections of their trunks and branches are according to the determination of Keill, it is evident that this computation is much too high. Proper allowances being made for such circumstances, it is inferred, that the impulsive power of the heart over a single red globule in a capillary would not amount to more than $\frac{1}{35471330}$ th part of a grain, which is but little more than half its weight.* If, again, abatements are made for friction, it is probable it would even fall short of its own weight. Upon these

* The weight of a single red globule being estimated at $\frac{1}{30000000}$ th part of a grain, after the following manner:—

The diameter of a red globule being $\frac{1}{2000}$ th of an inch, and spheres in the triplicate ratio of their diameters,

Sphere of a red globule : an inch sphere of such globules :: $\frac{1}{2000}^3$: 1^3
:: 1 : 8000000000.

Now, since an inch sphere of water weighs $132\frac{3}{4}$ grains, and the specific gravity of water and the red particles of blood are as 1000 and 1093,

Weight of an inch sphere of red particles : $132\frac{3}{4}$:: 1000 : 1093

$$\therefore \text{Inch sphere of red particles} = \frac{132\frac{3}{4} \times 1000}{1093} = 144.986$$

\therefore By substitution in the foregoing proportion (spheres of the same density being as their weights),

Weight of red globule : 144.986 :: 1 : 8000000000

$$\therefore \text{Weight of red globule} = \frac{144.986}{8000000000} = \frac{1}{55109000}, \text{ which is rather less}$$

than $\frac{1}{50000000}$ th part of a grain.

grounds, it is inferred that the heart cannot be the sole circulating power in the system.

That the conclusion at which our author has here arrived, fairly results from its premises, I am by no means disposed to deny; but, if the principles which serve for its foundation can be shewn to be faulty, of course it must fall to the ground. We will now, therefore, make some brief inquiry into their validity.

In the first place, then, I maintain that the celebrated experiment of Hales, which forms the ground-work of the argument, is quite inapplicable to the case of the circulation.

To form an accurate idea of the blood's motion, we must conceive a circular tube always filled with fluid, which is set in motion by a simultaneous contraction and dilatation at two contiguous points of its circumference. Were it not for such a construction, the fluid within would ever remain motionless; but by this contrivance, as one point contracts and propels its contents, the other relaxes and receives a proportional quantity. So that, in fact, there is formed a continuous flowing column, whose origin is the left ventricle, and whose termination is the right auricle, of the heart. If, then, this propelling force be in its nature *percussive*, it is obvious that such a column would readily propagate any shock given at one extremity of it to the other. This subject, perhaps, may be not unaptly illustrated by a chain of contiguous balls. If the first ball in this chain be acted on by the force of impact, which is only another name for *percussion*, such force will be transmitted through every link in the chain; and the last ball will move through a space proportional to the force impressed. Now, if the chain of balls be supposed of double the length, and the same force be applied, the last ball will be impelled through as great a space as in the former case; and, consequently, the given force will be equally effective at double the distance: if the chain be tripled, at treble the distance, and so on. We have here, then, a convincing proof, how the same force, applied at one extremity of a chain of balls, may be made to extend its effects *by lengthening that chain*.

Now, if this view of the subject be applicable to the blood's motion, it is obvious that the experiment of Hale's can in nowise be regarded as a criterion of the heart's force in the ordinary business of circulation; for in the ordinary business of circulation, the column of blood, which we will suppose to be represented by the chain of balls, is much greater than in the instance quoted by that physiologist; and, consequently, the heart's force will reach to a proportionably greater distance.

Were this the only objection that could be made to the argument under consideration, even then, I confess, it would appear to me sufficiently invalidated; but there are other reasons against it, of an equally cogent nature. In particular, it is well known how much disagreement exists with regard to the real dimensions of the red globule, some physiologists computing its diameter to be twice as great as others. On this ground, therefore, the assumption that it is the ~~100th~~ 100th part of an inch, is perfectly inadmissible, and must

assuredly lead to erroneous conclusions: but I am the less disposed to dwell on this point, because I perceive, in the doctrine which our author has imbibed respecting the ratios of the trunks and branches of the vascular system, a most palpable and extensive source of error. Such ratios were obtained from admeasurements of the great arteries when injected after death with wax. Now, it stands upon unquestionable evidence, that these vessels possess, during life, a *tonic and vital contraction*, which diminishes their diameters beyond what could have been effected by the mere force of their elasticity; and which, *on the death of the animal, wholly ceases*. In what degrees this property is distributed to arteries of different capacities, we have yet to learn; but the existence of it, generally, in this description of vessels during life, is fatal to any conclusions derived from *post mortem* researches, with regard either to their absolute or relative dimensions. The supposition, also, that the heart acts by the force of mere pressure, is another erroneous element in the composition of Whytt's argument. If, then, the doctrine espoused by this able writer can claim for its support only assumptions that will not bear the test of examination, assuredly it ought to be abandoned; and especially when it is shewn, as hereafter it will be, that it is in direct opposition to facts which may fairly be deemed incontrovertible.

I am aware, it may be here said that the failure of one proof affords no just ground for concluding that the point in question may not be substantiated by other arguments, of a nature perfectly undeniable; and, while I admit the truth of this remark, I would observe, by way of reply, that if the blood vessels really perform the office of auxiliaries to the heart in the circulation of the blood, they must do so either by *virtue of their elastic or muscular properties*. But that they cannot act by virtue of their elasticity, is manifest from the consideration, that as much of the heart's force is destroyed in the act of distending this system of vessels beyond their natural calibre, as can possibly be gained by their subsequent elastic contraction. The other supposition, therefore, is the only ground upon which this opinion can, with any shew of reason, be supported. Willingly would I acquiesce in the opinion here adduced, could it be satisfactorily proved that the vascular system is endowed with a muscular apparatus; for I am persuaded that nature has never furnished a part with such an apparatus without intending thereby that motion should be generated. But though ready to make this concession, I cannot refrain from expressing my conviction, that no one has hitherto been able to advance any *direct proof* of the muscular structure of blood vessels.

If veins and arteries be a species of muscle, it is evident they must be of the nature of what are denominated hollow muscles; that is, they must be such muscles as the heart, the œsophagus, the stomach, and intestines. Now, if these muscles are pricked, or in any manner irritated, a violent action, consisting of alternate contraction and dilatation, ensues. But do the blood vessels, under such treatment, exhibit similar phenomena? No one, I imagine,

will be hardly enough to reply affirmatively to this question. The illustrious Haller, anxious to demonstrate the alternate contraction and dilatation of arteries, could not, by the application of the strongest stimuli, excite such motions in the aorta; or, indeed, in any of the other arteries satisfactorily. And, to descend to later times, the numerous and well-devised experiments of Dr. Parry and his associates (all men of veracity and sound judgment), place this subject in a much more decisive point of view. The delicate contrivance invented by this ingenious physician for detecting the slightest alteration in the dimensions of a vessel, discovered, in no one instance, any sensible change in its magnitude during either the systole or diastole of the heart; that is, afforded no evidence whatever of its alternate contraction and dilatation, or, in other words, of its muscularity.

In the next place, I would remark, upon the authority of the best chemists of the day, that fibrine, that grand constituent of muscular fibre, enters not into the composition of blood vessels.

In the last place, I would ask, if there be any thing in the appearance of an artery or vein to induce an unprejudiced inquirer to infer the existence of a *muscular* structure? If I were to judge from the evidence of my own senses, I should certainly answer, not. Very many examinations have I made for the purpose of discovering these much-talked of muscular fibres, but in vain. I am aware, indeed, that it would be no difficult matter for the anatomist to produce in blood vessels somewhat resembling a fibrous structure. Such exhibitions are, in fact, no uncommon occurrence; but it follows not from thence that these fibres are muscular. Ligaments, tendons, and bones, also exhibit a fibrous appearance; but no one ever imagined that such fibres were all the same in kind, or that any of them possessed *muscular* properties. The truth seems to be, that there are in the animal body fibres of various sorts, some intended for motion, and others not. Of the latter description must be the fibres of arteries, if, indeed, they have any; for it would be an unwarrantable assumption to call them *muscular*, when they evince not a single characteristic essential to muscular fibre.

But, for the sake of argument, we will even suppose, what we believe to be inconsistent with fact, that the contrary of this doctrine is true. To become carriers or conductors of their contents, the blood vessels must, at least reasoning from analogy, be endowed with a muscular apparatus similar to that which we observe in all other conductors, as the œsophagus, stomach, intestines, &c.; that is, they must possess longitudinal as well as circular fibres. But in so far as I am acquainted with the subject, the most strenuous advocates for their muscularity have never pretended to demonstrate the existence of the longitudinal sort. Will then the bare supposition of circular fibres enable these vessels to perform the office ascribed to them? When the systole of the heart is just completed, we will imagine the contraction of these fibres to begin. Now, it is evident, that the effect of such contraction must be to impel the

blood as forcibly *towards* the centre of circulation as from it. The valves at the origin of the aorta, indeed, will prevent its regurgitation into the source from whence it came ; but as motion is generated in that direction, such motion must be destroyed, by the subsequent contraction of the heart, before it can advance the circulation by its renewed effort. According to this theory, then, the heart is perpetually destroying the motion which it generates. How improbable is such a supposition ! and how repugnant to that wisdom and simplicity which we constantly behold in nature's works ! No less inconsistent is it with the end which the supporters of this doctrine propose to themselves (*viz.*)—to supply the heart with auxiliary powers, by reason of its supposed incompetency to the circulating function.

Since, then, it would appear, from the foregoing reflections, not only that there is no necessity for supposing a co-operating influence in blood vessels, but also that that supposition is negatived by an appeal to a multitude of very decisive facts and experiments, I see no alternative but that of recurring to the Harveian notion of the powers by which the blood is propelled through the body ; and although the obstacles which this mass of fluid has to encounter in its progress are confessedly great, yet I am firmly persuaded that the heart alone is possessed of energies more than commensurate with all such resistances.

Let any one apply his hand to the left side of the thorax, and he will find that the sensation communicated is that of a *blow or percussive force*.* If, then, the action of the heart produce on the solid parts of the body an effect exactly resembling *percussion* ; it might, *à priori*, be concluded, that it would produce a similar effect on the fluids subject to its control ; that is, that the left ventricle, *by its instantaneous action*, would impel its contents with a percussive force against the antecedent column of blood in the aorta, and communicate a shock through all the continuous columns thence arising.† But this conclusion rests not upon mere analogical reasoning ; it stands on the firm basis of facts familiar to every one conversant with the healing art. In the act of feeling the pulse, by which a moderate compression is made on an artery, the finger experiences a *succession of shocks or impulses* ; and hence this sensation has ever been expressed by the words *pulsus, pulsatio, &c.*, which strictly denote the act of striking or beating ; but as a farther confirmation of this opinion, we would advert to the manner in which the blood escapes from a divided artery. When an artery is either divided or punctured, its contents issue out in jets or leaps,

* 'Cor ferire pectus,' 'percussio pectoris,' are expressions perpetually occurring in Harvey, *De Motu Sanguinis*.

† 'Premere cor, neque percutere, id quidem mihi mera videtur subtilitas. Musculus est, quem cor vocamus ; musculorum est, si artissimè voce uti placet, *percutere* ; neque video, cur cor omnium musculorum facillè mobilissimum, inque suo motu constantissimum, à communi musculorum officio Vir Cl. releget ? Embolo percutienti confert Cl. Fournier.'—Vide HALLERI *Physiolog.*, sect. iv. cap. 36.

corresponding with the successive impulses of the heart. Now, this phenomenon appears to me quite irreconcilable with the notion of a pressing force. For, fill a vessel with water, and suffer it to escape through any aperture in that vessel, and you have then an example of the effects of a *pressing* force. Now, in what manner does the fluid escape in this case? In an even and uninterrupted stream, wholly devoid of those measured impulses which characterise the efflux of blood from a divided artery. It may fairly be inferred, then, that such different effects must spring from different causes; that is, that the motion of the blood cannot be referred to pressure. In all reason, therefore, it must be considered as originating in *percussion*; and, for the farther elucidation of our subject, it becomes necessary to make an observation or two on the nature and properties of this species of force.

Now, the first remark we would make with regard to a *percussive* force, is, that its action is *instantaneous*; that is, that the whole of this force is communicated in *an infinitely small time*.^{*} The force of *pressure*, on the contrary, requires a finite and assignable portion of time for its operation. But we may conceive a percussive force, acting during *an infinitely small time*, as equivalent to a pressing force, acting during *a finite time*; that is, during an *infinite number* of such infinitely small instants of time. By the hypothesis, the effect of each force is the same; but if we compare the whole effect of the percussive force, which is produced in *an infinitely small time*, with the whole effect of the pressing force produced during the *same infinitely small instant*, the effect of percussion will be to the effect of pressure as infinity to one; or, to speak more correctly, those effects will bear no comparison. If, therefore, these two forces be supposed to act only for an infinitely small time; *which is a condition inseparable from the nature of percussion*, no comparison can be instituted, the effects of percussion so infinitely transcending those of pressure. In this sense, and under this restriction, it has with truth been affirmed, that the smallest percussive force is more effective than the greatest practicable pressure.

Or, to state this matter more briefly; if we suppose *M* to denote any mass of matter or body without motion, and only possessed of its pressing force, then will that force be denoted by *M*, if it be conceived to act for a finite assignable time; but considered as a force of percussion, that is, as acting for an infinitely small time, its velocity or motion being 0, or nothing; its percussive force will be $0 \times M$, which is 0, or nothing; that is, it will be less than any percussive force whatever.

^{*} The instantaneous nature of the heart's action is well expressed by Harvey, who considered it as the chief difficulty he had to encounter in his researches respecting the circulation. His words are as follow:—'Nec enim quomodo systole aut diastole fieret, nec quando aut ubi dilatatio et constrictio existeret, rectè potui internoscere; propter celeritatem scilicet motû, qui in multis animalibus, nictu oculi, quasi trajecto fulgure, se in conspectum exhibuit et subtraxit illic.'—*De Mot. Cordis*, cap. i.

From these considerations, we may learn the vast disproportion between the forces of percussion and pressure; but whether the reasoning here introduced be thought satisfactory or not, we are at least certain, that the conclusion to which it leads is established upon the evidence of palpable and notorious facts. Every one is aware, that a blow from a small hammer will drive a nail into a piece of wood to such a depth as could scarcely be effected by the greatest possible pressure, acting for a considerable space of time. When such pressure, as to sense, has effected all that it is capable of, let it be removed, and another blow from the same hammer will cause it to penetrate still deeper.

Again, it is well known, that a ship-carpenter, with a single blow of his mallet, is able to drive a wedge under the largest ship when aground, and actually to force her up from her situation. If this same individual were to attempt by a muscular effort, I mean by a pressing force, to heave up so vast a bulk, he would be looked upon as little better than a madman for his pains. It were easy to multiply similar instances; but these abundantly prove the prodigious advantage of a percussive over a pressing force.

If, then, as we trust has already been shewn, *percussion be the mode of the heart's action*, the grand objection on the score of the capacity of this organ to become the sole agent of circulation, is removed. For when we perceive that the muscles of a man's arm, through the *medium of percussion*, do produce such stupendous effects, we are justified in concluding, that the heart also (which is a very powerful muscle), *acting through the same medium*, may be capable of effects equally astonishing. The resistances, therefore, to the blood's motion, whether arising from the vessels themselves, their untoward directions, or the friction of the blood against their sides, though unquestionably very great, may, under this view of the subject, be fairly disregarded.

Upon these grounds, then, I will venture to express my conviction, that the heart is possessed of a power fully adequate to the circulation; and if it be good philosophy never to assign more causes than are sufficient for the explication of phenomena, we may venture a step farther, and assert that this organ is the *sole cause* of the blood's motion.

In advancing this opinion, however, I beg to be understood as pronouncing nothing dogmatically as to its correctness; for aught I know, it may be liable to insurmountable objections. But seeing the insufficiency of all other theories, I would propose it to the consideration of physiologists, as the most probable of any hitherto offered; and I do so the more willingly, because I am not without hope that it may be the means of awakening their attention to a subject which has of late fallen into unmerited neglect, and which assuredly deserves the most serious investigation.

The only anxiety I experience for the fate of my own conclusion arises from a conviction that, in conjunction with a well-known property of blood vessels, it would afford a simple and very beautiful

explanation of all those vascular derangements which constitute so large a proportion of human ills, and which have so long perplexed and divided the medical world. In fine, all I desire is, that the doctrine here advocated undergo a rigorous examination; and should it not be found to stand the test of fact and sound argument, readily will I relinquish it with all its attractions, being persuaded that the abandonment of error is the first step to the discovery of truth.

Reading, May 29, 1826.

II. Of the Use of Blisters in certain Chronic Eruptions of the Skin. BY EDWARD THOMPSON, Whitehaven; Member of the Royal College of Surgeons, London; and one of the Surgeons to the Dispensary and House of Recovery.

BLISTERS, in leprous diseases, have been recommended, and occasionally tried; but whether they have been imperfectly used, or that the affection depends, in most instances, on constitutional derangement, and from such cause less likely to be benefited by topical means, they have been found not to answer the expectation which, from the prevailing opinion entertained of the proximate cause of disorders of this nature, one should be inclined to hope. Their employment, indeed, is limited to affections perfectly local, and of a kind caused either by subacute inflammation, or those arising from inequality of action; or, as writers say, want of action in the formative and other vessels concerned in the organisation of the skin. When the eruption is caused by inflammation of an acute kind, in one or more coats of the organ, of course their action will rather tend to increase the evil than mitigate it; but when such a state does not exist, and when the disease has nothing to do with the system generally, I have reason to believe they possess a power, as a curative means, which they have not yet got the credit of.

The application of stimulants to certain disorders of the skin, although occasionally resorted to, is not often persevered in long and actively enough to have the effect which, if their action was only considered, they probably would have. If remedies possessing such a property excite any increase of heat or pain, they are immediately changed for others of a more bland nature, perhaps burnt cream, from which great and good effects are expected. This want of confidence in means that might benefit, arises from the empirical nature of our knowledge as respects disorder of the skin.

Vesicles, pustules, scales, &c., are the result of actions in the different tissues of the organ, of which we are nearly as ignorant as the Arabians were; and, with the exception of Mr. Plumbe's work on these affections, we have not one containing any thing worth recollecting, in a pathological view. Such being the case, no wonder that the treatment should partake of empiricism, and that

remedies should be imperfectly tried, and then cast aside as useless.

In many eruptions of a local nature, no application can have the slightest effect until the thickened epidermis, which lies between the seat of disease and the means used, be removed. Unguents, &c. rubbed on such a coat of mail, touch not the parts beneath, if employed for a year, and varied every week; but if such a preventive to the action of them be taken away, then there is a possibility of their effecting an alteration in the disordered action of the part, should the method taken to remove it not have the power. An active stimulant, applied to a part already in a state of low inflammation, will not so easily cause an alteration in the action, to an acute form, as a stimulant of minor powers; that is, that one has a greater tendency than the other to cause a continuance of the affection, in a more excited state. If the stimulant be violent, it will produce a greater excitement, but it is not the excitement of disease, it will subside, and healthy action will be the consequence. We see this take place frequently in the treatment of other affections.

In this way, blisters, applied to certain eruptions of the organ, operate. Their influence extends to the whole vascular system of the skin, to which they are applied, in a more direct way than any other application in use: such being a desideratum, in some cases, it appears strange they should not have been more generally employed.

The particular disorders to which they would appear the most applicable, are those originating from a low inflammation, or irregular action in the skin. Such as, recent patches of the *lepra alphoides*, not depending on constitutional causes: although blisters, used as adjuncts to internal means, may, when these causes exist, prove more beneficial than other external remedies that have at time and time received more than their quantum of praise. Varieties of *pityriasis*, *psoriasis*, *ichthyosis*, and others of the like kind. These will be benefited, if not oftentimes cured, by the free employment of blisters, of various degrees of strength. Thus I have known a case of *ichthyosis simplex* completely cured in a fortnight, by the application of a blister, that had resisted most other means; and a case of *psoriasis palmaria* entirely give way to two blisters, which had resisted both internal medicines and external applications during the space of eighteen months.

There are a number of other eruptions, differing in their nature to those above, to which I have little doubt blisters might be applied with advantage; but any proof of their effect does not come strengthened by trial, at least from my own personal knowledge, with the exception of a case of *ague*, in which a succession of blisters effected a cure. Of their employment in *porrigo*, I need not speak; they have not answered expectation, though oftentimes used: but I am not certain that in the cases wherein they were had recourse to, their full effect was produced. A single plaster will do nothing in some instances of cutaneous disease; it must be

repeated, I have reason to believe, many times before any benefit will be derived. Exciting a suppurating surface, in some cases, I have known of use, by applying blister after blister to the part.

In recommending blisters to be applied to various diseases of the skin, in which they have under my own knowledge been of use, I am not so sanguine as to expect they will always succeed, even in those instances where success is most promised; but I know enough of them to warrant me in stating, that they deserve a more extensive trial than they have yet received, and that oftentimes they will effect a cure, when other and more elaborate treatment has failed in producing any change.

Before closing this paper, I beg to take up a moment or two in speaking of another remedy, which I believe possesses a power in leprous diseases. I do not know that it has ever been before recommended in disorders of this kind. I was led to use it in one case from an idea I had formed (which, perhaps, runs counter to the received opinion), that affections of this nature depend on an increased action of the vascular system of the skin, accompanied by a diminished energy of the absorbents or lymphatics of the organ, attended by derangement of the constitution. Iodine was therefore given in the form of tincture, in decoction of sarsaparilla, as the most active agent in exciting the absorbents known, and with decided benefit. But from one case it is impossible to judge, as perhaps the decoction of sarsaparilla might have as much to do in the cure as the tincture of iodine. I hope, however, to have it in my power hereafter to speak more confidently of its effect in these intractable disorders, with a wish that those who possess greater opportunities may be induced to try it.

May 29, 1876.

SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. Employment of Sulphuric Ether in Hernia. By M. MANDREAX.

' A robust peasant, thirty years of age, sent for me one night at nine o'clock, on account of an inguinal hernia, which had taken place in the morning while he was mowing. It had been aggravated by the means employed to relieve it: the vomiting was continual, and the pain in the stomach most severe. I applied twenty leeches immediately to the tumour, which was very hard and prominent. After they had been applied, and he had been in the bath for three quarters of an hour, I dropped some sulphuric ether very slowly upon the tumour, taking care to confine it to this part. In less than a quarter of an hour the hernia had entirely disappeared. Two previous observations, very similar to these, made me prefer the present method to the employment of the taxis.

' The condensation of the air, which (with the contained liquids)

distended the fold of intestine that formed the hernia, by the evaporation of the æther, and the vital excitation (contraction) produced by this stimulant upon the intestine, caused its return into its natural situation, with so much the greater readiness, as the relaxation of the ring was more complete.

II. *Note of a Tumour which occupied the situation of the Coccyx, of which the Os Sacrum appeared deprived.* By M. VERDIER.

‘ON the 5th of April last, a little girl, born the same morning, was brought to me with a tumour in the situation of the coccyx, and equalling a turkey’s egg in size. An attentive examination convinced me that it occupied the situation of the coccyx, of which the sacrum appeared deprived. It was attached by a neck of more than an inch in circumference at its base, and was in this part cartilaginous; forcibly contracting upon the anus when raised up. The substance of this tumour was rather hard. One-half was covered by the skin, and the remainder was very red, with the exception of a space on the apex of the tumour, which, to nearly the extent of a two-franc piece, presented the polished appearance of intestine. A fluctuation was very manifest in this spot. Upon making a slight pressure upon the part, the infant for the first time evacuated meconium. Repeated trials were always attended with the same result; and in this way an evacuation could at any time be determined.

‘What was the nature of the tumour? Was it an hernia? The appearance afforded some reason for such a supposition, especially considering that the child had had no fecal evacuation from its birth (a space of seventeen hours). But what portion of intestine could have been forced there? How could it happen? Why was the coccyx deficient? Why was the neck of the tumour cartilaginous? Or, was it simply a fleshy tumour? How then explain the occurrence of alvine excretion with slight pressure, and its impossibility without it? How account for its forcible return upon the anus when raised up? These are the questions which presented themselves, and which it seemed scarcely possible to answer.

‘The next day, M. Verdier examined the child again, in company with MM. Labouysse, Clary, and Lacombe. The child had had no evacuation since the former examination, although it had sucked strongly. Pressure again produced it. That a communication existed, therefore, between the tumour and rectum seemed certain. Was there then a hernia, or was the rectum ruptured? The latter appeared the most probable; and, on examining with a sound, per anum, the os sacrum was manifestly denuded.

‘It was determined to place a ligature round the base of the tumour, and gradually to tighten it, if no bad symptoms supervened. A ligature of six silk threads was accordingly employed. On the 7th, nothing having occurred to prevent it, the ligature was tightened. On the 10th, she had voluntary natural evacuations. The apex of the tumour was black, and exhibited a fissure.

On the night of the 17th, the tumour separated. The wound immediately cicatrised; and the child is now in excellent health.

'The tumour was carefully dissected by the three physicians already mentioned, and myself. The part resembling intestine had burst, as already mentioned, on the fourth day. We were unable to ascertain the nature of its contents, as it had opened during the night. The probe shewed the channel of communication; it traversed the whole of the tumour, and ended in the empty space from which the fluid had escaped. Divided lengthways, its substance, which was entirely fleshy, strongly resisted the knife towards the middle part. Upon directing our attention to the resisting part, we recognised three small bones like vertebræ, and which we presumed to be the coccyx. The substance of the tumour was dense, the fibres very clearly set, and resembling those of the heart. It was scattered with five vesicles of different sizes, filled with albuminous matter, and exhibiting internally the appearance of mucous follicles. In the centre there was a membranous pouch, much greater in the part communicating directly with the rectum than elsewhere. There were traces of fecal matter.'—(*Révue Médicale*, Mars 1826.)

III. *Of the Modus Operandi of Poisons.*

M. SEGALAS has communicated to the Institut Royal de France some experiments on poisons, which seem to prove that they act rather by the vessels than the nerves. The following is an abridged account of his experiments:—

'1st. Having divided the medulla spinalis, so as to render the animal perfectly hemiplegic, he inserted some of the alcoholic extract of the *nux vomica* into the paralysed parts, when tetanic spasms as promptly and energetically supervened, as if the nervous system had remained untouched.

'2dly. He reversed the experiment. He left the medulla whole, but prevented the return of blood to the heart from the place where the poison had been inserted, and no spasm ensued.

'3dly. Tetanus supervened to the injection of the poison into the bronchial tubes, whether the eighth pair had been divided or not.

'4thly. The *nux vomica* inserted in the thigh of animals rendered paralytic by the division of the medulla spinalis, has produced convulsions, not only in the upper extremities, but in the paralysed limbs also.

'5thly. The same effect is manifest wherever the poison may have been deposited, whether in the abdomen, the thorax, the cellular membrane, the veins, or the bronchia, and the paralysed limbs and the parts not paralysed are equally submitted to the action of the poison; the contraction, however, of the paralysed muscles is slower, and appears to occur only in proportion as the blood carries poison to the nerves of the part.

'6thly. Having injected the poison into the crural artery of a paralytic animal, the same result had place: convulsions ensued immediately in the thighs, and were not general till a sufficient

time had elapsed for the blood to have carried the poison to the spinal chord. M. Segalas concludes from these experiments, that voluntary muscles may sometimes contract independently of the cerebro spinal system. The division of the spinal chord was made in different places. It was made usually either between the last cervical and first dorsal vertebrae, or between some of the lumbar vertebrae. Wherever divided, there was no difference in the phenomena.'—(*Révue Médicale*, Mars 1826.)

IV. Of the bad Effects of Carious Teeth.

M. Piorry has communicated some observations respecting the influence of the teeth upon the neighbouring parts.

'1st. *The teeth induce diseases by juxta position.* Thus the asperities which they present on their surface often give rise to ulcerations of the tongue and the cheeks. Their cariousness produces fistula, necrosis of the maxillary bones, disease of the maxillary sinus.

'2dly. *In consequence of regular or irregular variations in their development*—inflammation, ulceration, and suppuration of the gums, a complete alteration of the countenance, dilatation of the alveolar cavity, either by a spina ventosa, an exostosis of the root of the tooth, by a cyst, &c.

'3dly. *By the continuity of membranes*, a disease may be communicated to the lining membrane of the mouth, and to the gums; scorbutus may be simulated, salivation excited, and an inflammation of the larynx, throat, and primæ viæ be produced.

'4thly. *By continuity of vessels*, the caries of one or more teeth has brought on inflammation of the maxillary sinus, swelling of the lymphatic maxillary glands, and abscess of these glands.

'5thly. *It is by the fluids which the teeth elaborate, (elaborent,) or by the substances they prepare*, that the caries of one tooth is propagated to another that touches it; and digestion becomes incomplete when the teeth are all diseased or lost.

'6thly. *It is by the communications of nerves of sensation* that dentition sometimes produces cephalitis, diseases of the upper teeth, running from the eyes, ophthalmia, lachrymal fistula, suborbital neuralgia, migrains, otalgia, &c.

'7thly. *By communication with the nerves of motion*, diseases of the teeth produce convulsions.

'8thly. *By complicated influences*, affections of the teeth produce catarrhs, abscess, erysipelas of the face, &c. M. Piorry deduces from this enumeration of all these facts, that a carious tooth ought to be extracted, even when it does not produce pain. M. Piorry added to his memoir three observations of ophthalmia, derived from carious teeth, and which have been cured by drawing the teeth.

In many respects, this memoir of M. Piorry is worthy of notice, and his observations may be beneficial in practice. We can, however, by no means join in his recommendation of drawing every carious tooth, even when no suffering is endured; for though we believe many inconveniences do proceed from diseased teeth, yet

these are neither so frequent nor of so serious a nature as to require, under all circumstances, their abstraction. To this also is to be added the impossibility of mastication being properly performed when the teeth are wanting, and the consequent imperfection of digestion, a far more fruitful source of disease than carious teeth. The teeth, however, ought, without question, to be much more frequently considered than they are in general practice. Ulceration of the lips and gums, even to the total loss of these last, is no infrequent consequence of the accumulation of tartar round the neck of the tooth; nor will any thing but the removal of the tartar enable a practitioner to cure permanently either the one or the other. This condition of the lips and gums is likewise frequently united with an aggravated dyspeptic state, and the two disorders then operate injuriously upon each other. We have more than once found a case of dyspepsia readily curable after the removal of the accumulated tartar from the teeth, which had previously resisted every remedy that had been employed.—EDITORS.

V. Of Absorption—the Use of Cupping Glasses against External Poisoning—and of Acetate of Potash in Drunkenness.

DR. BARRY read, in the Institut Royal de France, Sitting of March 20, an additional memoir upon the influence of atmospheric air upon absorption. In this memoir Dr. Barry regards the veins and lymphatic vessels as tubes of communication between the vacuum made in the chest during inspiration and the whole external surface of the body, and therefore that when any liquid enters the mouths of these vessels, it is in the same manner that a fluid enters a syringe upon withdrawing the piston. Absorption, consequently, in the opinion of Dr. Barry, is due to atmospheric pressure.

Dr. Barry supports this theory by his previous experiments, and by additional facts, which tend more and more to prove the efficacy of the cupping-glass. We know that Fontena had established that the bite of the viper is inevitably fatal to pigeons, but that if a ligature is tied between the bitten part and the heart the animal's life may be preserved. This, however, must be done *immediately*. Dr. Barry has been able to save the animal when the poison had remained some time. It sufficed for this purpose to apply the cupping-glass, and afterwards to cut out the part. Dr. Barry recommends this plan to be pursued even after the first symptoms of hydrophobia have manifested themselves. The glass should be applied for an hour.

At the same sitting, M. Fournier read a memoir from M. Mazuyer, of Strasbourg, upon the advantages to be derived from the employment of acetate of potash. This substance overcomes the effects of drunkenness in less than five or six minutes.'—(*Académie Royale de Médecine, February 28.*)

VI. Aneurism of the Aorta.

M. ANDRAL, jun. read a report upon an observation of M. Noble, of Versailles, where this disease affected the thoracic portion of the

aorta, and formed an immense tumour, extending to the left shoulder. He concluded by some remarks upon this kind of aneurism.

1st. That the anasarca, which is often general in diseases of the heart, is almost always partial in the affections of the aorta. In the instance related by M. Noble it was confined to the left upper extremity.

2dly. Vascular ramifications are sometimes observable in the coagula of the aneurysmal sac, evidencing the commencement of organisation in the same way that the ramifications in the pseudo membranous concretions of the serous membranes, evince that organisation has commenced in these productions.

3dly. It rarely happens that the pressure of the aneurismal sac is sufficient so far to destroy the vertebræ as to give rise to pressure upon the spinal chord. M. Laennec related a case of this kind to the meeting: the dura mater was altered, the medulla compressed, and paralysis, the consequence of this compression, had suddenly supervened upon the rupture of the aneurism.

VIII. *Functions of the different parts of the Brain in Fish.*

‘M. FLOURENS, known to us by his experiments on the cerebellum, and other parts of the encephalon, has published a series of experiments, intended to demonstrate the nature of the different parts of the brain of fishes. M. Serres, in his able work, has spent much time in endeavouring to classify and compare the strangely arranged forms of the encephalon of these animals, by dissection. M. Flourens has endeavoured to show the functions of the same parts, by observing the changes consequent upon their removal. This he considers as the only true test of their nature and analogy to any corresponding parts in other animals. We shall sketch his results. In comparing fishes with superior animals, he concludes that the point in which the brain of the first differs most materially from that of the latter, is that part of the organ which presides over the function of respiration. This appears, by various experiments, and by rational conclusions drawn from dissection, principally through the labours of Messrs. Flourens and Charles Bell, to be, in the higher animals, that longitudinal division of the medulla oblongata from which arise the eighth pair of nerves and the other nerves of respiration. (The respiratory nerves, according to Mr. Bell, may be recollected to be the par vagum, portio dura, spinal accessory, phrenic, and a trunk called by Mr. Bell the external respiratory, arising from the cervical nerves, and connected with the phrenic.) In fish, M. Flourens found it augmented into a ganglioniform mass, nearly as large as the cerebral hemispheres themselves; and from this ganglion arose the nerves which ran to the gill covers, the *opercula* of the fish's organs of respiration. The reason of this, our author considers to be, that respiration is a function incomparably more laborious in fish than in land animals, the first being obliged to employ only the very small quantity of air which is contained in the water that traverses their gills. It thus requires a more energetic nervous influence.

'In the *carp*, besides the longitudinal medulla, resembling the medulla oblongata, there are four successive enlargements, in addition to the olfactory lobules. The first, after these, is double, and corresponds to the cerebral hemispheres. Puncturing it causes no convulsions, its removal stupifies the animal, and apparently deprives it of sight and hearing; it gives origin to no nerves, and it unites with the olfactory lobes.

'The second pair produces convulsions when irritated, and gives origin to the optic nerves. These are the optic tubercles, long erroneously called the optic *thalami*, but now acknowledged by M. Serres, and all the latest writers, to have been correctly pointed out by Spurzheim as identical with the *corpora quadrigemina* of the human subject.

'The third enlargement is single; it gives origin to no nerves, and produces no convulsions; its removal produces the same disturbance in the harmony of the movements of the animal which were previously observed by M. Flourens in that of the cerebellum of the mammifera. It is considered identical with the last named organ.

'The fourth enlargement consists of a middle tubercle, and two lateral masses; when punctured, it produces convulsions in the respiratory organs, (viz. in the opercula); it supplies all the nerves of the opercula; its removal, in fine, stops the motions of respiration. It is therefore considered to be a cerebral organ of respiration, and to correspond to that part of the medulla oblongata which gives origin to the respiratory nerves in man and quadrupeds. The section of either lateral mass suppressed respiration on that side, and the removal of the whole, or the simply slitting the middle portion longitudinally, destroyed respiration altogether.

'In the *eel pout*, (*la lotte*), there were, first, two ganglions representing the hemispheres; next, two others, being the optic tubercles; and lastly, the cerebellum, being a single body. Two lateral enlargements of the medulla oblonga were here found to be the organ of respiratory influence. The bream, the tench, and several other species of the genus *cyprinus*, resembled the *carp*, both in structure and in the effects of excision of these parts.

'In the pike, there was no respiratory lobe; the cerebral hemispheres were here larger, and the effects of their removal more striking.

'In the eel, there are five successive organs: the two first pair of lobes our author considers to be both olfactory lobes, the next the hemispheres, the next the optic tubercles, and the next organ a single cerebellum without respiratory lobes.'—(*Experiences sur la système nerveux*, par P. Flourens.

IX. Cicatrization of Wounds of the Brain.

'Is the course of M. Flourens' experiments, he had frequent occasion to witness the healing of wounds inflicted on various parts of the brain. He subsequently repeated some of these operations, with the express view of observing the manner in which injuries are

repaired. His conclusions, most of which appear fully warranted by the details with which he has furnished us, are as follow :

‘ Wounds of the brain with loss of substance, are followed by a fine and smooth cicatrix of the mutilated surface.

‘ Wounds producing simple division, merely unite by the immediate reunion of the divided parts.

‘ When a ventricle is deprived of its superior parietes, the cavity is again completed, and the surface which covered it renewed by the extension of its lateral parietes.

‘ When the destroyed substance is re-produced, the animal regains the functions of the part removed, unless the amount destroyed exceed certain limits. M. Flourens judges of this very difficult question by the fact that the animal recovers, to a partial extent, from the stupor which has been originally produced by the injury. In one case, also, the animal recovered the use of an eye.

‘ New bone and new skin are formed ; and, as our author says, new *species* of them. While cicatrizing, the wound is protected by a crust of some sort ; either, as is most commonly the case, by a stratum of dried blood, or, if this be removed, by a portion of dried lymph, or by a piece of bone or skin. Great abundance of a transparent lymph is found beneath this protecting substance, and it escapes when an opening is made. The healing surface is covered with *lardaceous* granulations, and thickly bestrown with red points and streaks. The experiments were made on ducks and fowls.’—*(North American Medical and Surgical Journal.)*

X. *Acupuncture in Suspended Animation.*

‘ DR. ANTONIO CARRARO relates, that in the presence of several persons, he plunged a young kitten, eight days old, into cold water. The animal was retained under until all motion had ceased. When withdrawn, the tongue protruded out of the mouth, and was covered with froth ; the limbs were stiff, the heart did not beat, and all signs of life had disappeared. When plunged a second time into the water it sunk to the bottom. It was again withdrawn, exposed to the sun, wiped dry with warm clothes. Frictions on the abdomen were next resorted to ; but none of these means producing any effect, acupuncture was performed, about three quarters of an hour after signs of life had ceased. A needle was passed through the heart, the point resting on the dorsal vertebrae. In less than five minutes the needle began to be slightly agitated, announcing a movement in the heart. This rapidly increased, and was soon followed by motion of the anterior extremities ; next by the act of respiration, cries, and finally by movement of the whole body. Placed in its basket, the animal remained two hours in a very languid state, but at the end of this time, the mother having come to its assistance, warmed, suckled, and re-animated it. From this circumstance, Dr. Carraro concludes that this state of debility depended more on the coldness the animal had experienced in the water than on the puncture of the heart. A month after this expe-

ment the kitten enjoyed excellent health, and displayed all the vivacity of the species.

'The same experiment was repeated many times, with equal success; from which Dr. C. concludes that the puncture of the heart is not only a useful, but a safe operation. He expresses his hope, that, in cases of asphyxia in human subjects, physicians will resort to it in preference to any other means.'—*Annali. Univers. di Medic.* 1825.

XI. An Account of the Pinta, or Blue-stain, a singular Cutaneous Disease prevailing in Mexico. By SAMUEL M'CLELLAN, M.D.

'FROM the information which I obtained from the most intelligent of the natives, I can only state that the disease, denominated by them the *pinta*, or blue-stain, made its appearance in the neighbourhood of the Volcano of Jorullo,* in the northern part of the province of Valladolid, shortly after its first eruption, and has gradually extended south, through the whole of the *Tierra Caliente*,† as far as the town of Mascala, on the road from Mexico to Acapulco, and I believe still further south. It has generally prevailed among the lower class of people, who are of a dark colour; and is said to commence with slight rigours and nausea, followed by some degree of fever. These symptoms last only for a few days, when, on their subsiding, discoloured spots are discovered upon the face, breast, and limbs, of a lighter or yellowish appearance, which gradually change to a blue, and in advanced stages to a black, almost resembling the negro skin. In this stage, the skin also has a rough and scaly appearance, and is somewhat inflamed, forming, when injured, either by accident or the stings of insects, deep and foul-looking ulcers, with hardened, and, in some cases that I saw, inverted edges, which the people themselves consider incurable. The perspiration of these persons is peculiarly offensive; but I believe their general health is not much affected, at least I did not understand that they suffered more from other complaints than those who were free from it. There is at present in the city of Mexico a regi-

* 'The volcano of Jorullo, situated upon an estate of that name, broke out in the year 1775, from a level plain, and rose in one night to the height of between three and four thousand feet. Arrowsmith has given the name incorrectly in his map, by attempting to spell it in English as it is pronounced by the Mexicans.'

† 'The *Tierra Caliente*, or hot country, is divided from the coast, (a narrow tract of land, so called by the natives, extending along the Pacific, from two to six leagues in width,) by the *Sierra Madre*, or Mother Mountains, a rough and broken chain, which running parallel to the coast, is from thirty to seventy leagues across. This country lies between the Mother Mountains and the foot of the great Cordillera of Anahuac, and extends through the provinces of Valladolid and Mexico, into that of Puebla. It varies in width from thirty to sixty miles. The surface is broken by numerous ridges of high hills, with the vallies lying around their bases, and communicating with each other, well watered by numerous rivers. The soil is very fine, admitting the cultivation of all the products of a tropical climate.'

ment composed of persons affected with this disease, denominated the Pinta regiment, and officered by white men, who are appointed by government. A soldier's life, of course, subjects them to fatigue and privations, which, however, they appear to endure without more complaint or injury than others. They very generally, however, in common with all others who use the same diet,* are affected with dyspeptic complaints.

‘The disease is said to be infectious, and facts seem to corroborate the account. I have seen persons who were born and bred up in the higher districts, where it is not known except by report, after having lived for a few years in the low country in habits of intimacy with the people, return with the disease. Nurses who are infected with it, and have been employed in the higher districts, have communicated it to children; but these, when treated in the first stage by light cathartics, and some of the active diaphoretic plants, with which that country abounds, are said to have been cured.

‘There are many persons of the higher classes, however, who have resided nearly the whole of their lives among the Pintos, and have even employed them occasionally as servants in their houses, without contracting it; but such have always enjoined the greatest cleanliness both upon themselves and servants, by repeated bathings, ablutions, &c. Others, who have not observed these precautions, have not been so fortunate; but among these I have not seen the disease so far advanced as among the lower classes. I do not recollect of having myself seen a single instance where the disease had been contracted out of the infected district, although these people are frequently met in almost all parts of the country west of the city of Mexico, passing and repassing with their produce, and other articles for sale; nor is the disease known otherwise than by name on the Pacific coast, or in other adjacent tracts of country which are separated from the *Tierra Caliente* only by intervening ridges of mountains.

‘Whether this disease is ever communicated by propagation or not, is very difficult to determine. In all the families in which I witnessed it, the children were infected; but whether it was inherited, or communicated to them by contact, is quite uncertain. I have seen it in infants at the breast. Others were said to have been free from it until a year or two of age. Such are always brought up, as they afterwards live, in extreme filth. It should be recollected also, that their diet is far from being delicious or wholesome.

‘It appears to me that this disease cannot with propriety be identified with leprosy. If it be, however, it must certainly be considered as a remarkable variety, and of an uncommonly mild form. I regarded it as merely a cutaneous disease, as I saw it affecting no other part of the body. The people believe it to be distinct from

* ‘The lower classes of people in Mexico live chiefly on corn-cakes and meat cooked with lard and red-pepper.’

leprosy, which disease is not unknown among them, since I was called to see two reputed cases of it at Rosario, near the district of the Pintos. An elder brother of these two had been previously sent to the mountains by the alcaldes of the village to prevent an extension of what they considered to be the genuine leprosy.

'The physicians of the country, in whom however but little confidence is to be placed, regard the pinta as a specific disease, and as generally incurable. I never heard of even an attempt to cure it in the low country. It was at Temascaltepec, five or six thousand feet above the level of the ocean, that it was said to have been cured in the cases of infants when taken from their nurses.'—(*American Medical Review*, vol. ii.)

XII. Case of Inguinal Aneurism, in which the Operation of securing the External Iliac Artery by Ligature was performed with success. By DAVID L. ROGERS, M.D., Demonstrator of Surgery in the College of Physicians and Surgeons of New York.

'MR. D., the subject of the following case, for the period of fourteen years laboured under a troublesome inguinal hernia, to obviate the inconvenience of which a truss was applied. His calling being of an active kind necessarily aggravated his complaint, insomuch that a truss of ordinary elasticity was wholly insufficient to confine the hernial contents within the abdomen. This circumstance induced him to substitute another of much greater firmness; this instrument answered his expectations in relation to the rupture; but it was not, however, unattended with difficulties. By the firm and constant pressure which it exerted on the parts, much pain and irritation were produced. In this condition he continued to attend to his daily avocations, until three or four weeks previous to the operation, when he became alarmed at the appearance of a small pulsating tumour in his left groin, immediately below the crural ligament. The tumour gradually enlarged, and had acquired the size of a billiard ball when his physician was summoned to attend, who made known to him the nature of his disease, and advised immediate surgical aid.

'Dr. D. L. Rogers was accordingly called in, and on examination an aneurism of the inguinal artery, of considerable magnitude, presented, one-third of which extended under Poupart's ligament. An operation was decided on, and, in the presence of Dr. Mott and several other professional gentlemen, was commenced, by making an incision through the integuments, beginning an inch from the anterior superior spine of the ilium, and extending with a slight curve, obliquely downward and forward to midway between the internal abdominal ring and the crural arch; the contiguity of the epigastric artery to the internal ring prevented a further extension of the incision forward. The first incision (which was much increased in depth, owing to the thickened state of the skin and cellular membrane, from the action of the truss and effusion) exposed the aponeurotic expansion of the external oblique muscle: this being divided in the same direction, and turned up, brought to

view the inferior margin of the internal oblique, which, together with the transversalis abdominis muscle, being raised, the internal abdominal ring was laid bare. Here, it may not be amiss to observe, that the hernia, by its constant protrusion, was no small hindrance to the easy performance of this operation. With the finger and handle of the scalpel, the ring was sufficiently enlarged to admit the introduction of the fingers behind the peritoneum, and brought in contact with the artery; the sheath of the vessels was now to be opened, but owing to the extreme inquietude of the patient, and the unusual depth of the wound, it was deemed unadvisable to use the knife; the finger nail was therefore substituted; a single ligature was passed round the artery, and tied about half an inch below the bifurcation of the common iliac. The wound was brought together, and dressed in the usual manner with adhesive straps. The patient recovered in six weeks, and continues to enjoy good health. The hernia has not reappeared since the operation; the closure of the internal ring from inflammation accounts for this.'—(*Medical Recorder*, No. 34.)

XIII. *Recovery from Abscess of the Brain.*

'A NEGRO man received a violent blow upon the skull, fell senseless, and lay in a comatose state for six months: a considerable swelling was observed on the side of his head at the end of that time, which was opened, and discharged a considerable quantity of pus: he awoke, and his senses continued perfect. In six months more, as the wound would heal up (presenting a fungous appearance about the size of a pea) and break out again, it was examined by Mr. B. Simons, and a probe was passed through an orifice in the integuments, near the posterior inferior angle of the left parietal bone, descending about three inches into the cavity of the skull; on withdrawing it, matter rushed out, proving that there was an abscess of the brain, which discharged through the fistulous openings in the tables of the bone. A circle of bone was removed by the trephine, and a large quantity of matter escaped. Mr. Simons introduced his finger into the orifice, and found a considerable cavity; and extending his finger about two inches, he felt the surface of the brain: pressure was made upon it, and the patient became comatose. After several months the wound healed perfectly, and the man was restored.'—(*Carolina Journal of Medicine*.)

XIV. *Case of sub-acute Inflammation of the Uterus, with Inflammation of the Uterine Veins.*

THE following case is reported by M. Louis in the *Archives Générales de Médecine* for March:—

'A woman, aged twenty-seven, of a good constitution, of small stature, but perfectly well formed, was admitted into the hospital of La Charité on the 3d of January, 1826, having been delivered twenty days previous, and attacked the day after her delivery with headach, shivering, pain in the hypogastric region, and slight

diarrhoea. These symptoms had continued up to the time of her admission; the shiverings were repeated every day at uncertain hours; the pain had scarcely extended beyond the hypogastric region, and no nausea was complained of until a fortnight after the commencement of the attack. There had been much thirst, as well as complete loss of appetite from the beginning. The discharge from the vagina had been more or less abundant, and of a mixed character, during the first and second week, and had since been considerably diminished. The diarrhoea had continued in a slight form; and the urine, which had become red, had for the last eight days been passed with difficulty; and it had been twice necessary to introduce the catheter, which was done without producing pain. Emollient cataplasms and demulcent drinks had been employed, but no sanguineous evacuation had been prescribed.

‘On the 4th, her countenance was animated, with an expression of uneasiness, and sometimes of pain; there was much feeling of weakness; the right thigh had been painful for four days, particularly on pressure, or when moved; the tongue was dry, and a little coated on the right side, although some tisane had been recently taken: mouth clammy, with bitter taste; intense thirst; anorexia, without nausea; but a little before the visit some mucous matter had been vomited, as well as on each of the two preceding days: the abdomen was soft, except on the right side, behind and above Poupart’s ligament, where there was a round tumour, about three inches in diameter, not very painful, except when pressed: pressure on the opposite side, in the same situation, gave very little inconvenience, and none any where else. There was very little discharge from the vagina: there had been no stool the preceding day; respiration was a little hurried; the pulse 120, regular, rather small; the heat moderate.—(*Thirty leeches to the hypogastric region; emollient lavement; emollient fomentations; lemonade; complete abstinence.*)

‘On the following day, there was nothing remarkable. On the 6th the uneasiness and weakness had increased; the sclerotics and the whole surface of the body were of a deep yellow colour; the tongue dry, and speech difficult: there had been two liquid stools, and the patient complained of pain in the situation of the anus, where a rather large hæmorrhoidal tumour was formed. An examination was made by the vagina and rectum, and the volume of the uterus was found somewhat increased; the os uteri was open, and very little painful. The tumour behind Poupart’s ligament, on the right side, did not seem to be connected with the body of the uterus, and did not participate in the movement of the latter. The patient was very hot during the day, so as frequently to throw off the bed-clothes; and there was delirium during the night.

‘On the 7th, the yellow colour of the skin was more intense, the countenance dejected, with a greater expression of uneasiness: tongue as before. The hypogastric region very painful, and the abdomen, below the umbilicus, rather hard, and tender on pressure.

The diarrhoea continued; the respiration was slightly accelerated, and sometimes sighing.

‘ On the 8th, there was an improvement in all the symptoms; the countenance was improved; the pulse less frequent; the patient had had a better night. The size of the abdomen, however, was increased. This somewhat favourable change was of short duration, and the patient was lethargic during the greatest part of the day. The same state continued the next morning, when the features were collapsed, abdominal pressure gave little pain: there had been numerous and involuntary stools: the tongue was pale and moist; and the patient made no complaint.

‘ On the 10th, the torpor continued, the patient did not speak during the day, and had only uttered some unintelligible sounds during the night: the pulse was a little quickened; the abdomen sensible on pressure, particularly on the right side; frequent, and involuntary stools. These symptoms continued, and the patient died early in the morning of the 21st.

‘ The body was examined thirty-three hours after death; and the following were the appearances in the abdomen:—

‘ The only circumstance remarked on first laying it open was the dryness of the peritoneum. The lower part of the omentum adhered to the ascending ramus of the os pubis; and half of the small intestines were in the smaller cavity of the pelvis, and the uppermost convolutions were united to one another, and with the parietes of the cavity superiorly, so as to prevent the escape of purulent matter collected in the pelvis. The pus was homogeneous, and of a deep yellow colour, except in a very small space, between the uterus and rectum, where it was tinged with blood. The parts with which this fluid was in contact, were lined with a thin, brittle membrane, below which the peritoneum was more or less red and livid; and the point of adhesion between the intestines was marked by a greyish or reddish line, opposite which there was a notable thickening of the muscular membrane. The size of the uterus was nearly one-half more than natural, its colour externally and internally a lively red; the vagina greyish, the os uteri soft, and a little elongated. The neck of the uterus contained a reddish viscid mucus, and the cavity was much larger than usual, presenting many reddish-brown points, and two excrescences, apparently polypous. The parietes of the uterus were red, and of more than double the usual thickness for the space of an inch, at the anterior part, though in other parts of the usual size; and the parenchymatous substance throughout was so much softened, that portions of it could readily be detached by the nails. On both sides, but chiefly on the right, gaping openings were seen on the edges of incisions made into the body of the uterus, of about two lines in extent, and which poured out a very thick and very yellow pus. These openings were the orifices of more or less flexuous canals. By cutting them with the help of a grooved stilet they were traced exterior to the uterus to a double tumour, the largest portion of which was an inch and a half in

length, and about an inch wide. These tumours were formed by an assemblage of the canals above indicated, all full of pus, and united into a single canal, which was continued for about nine inches, and terminated in the vena cava inferior, immediately below the renal veins. This canal was nothing more than the common trunk of the veins of the uterus, and the ovary of the right side, and was considerably smaller near its junction with the vena cava than in other parts. It contained pus in its whole extent, and was lined by a very thin and somewhat reddish membrane. Its internal surface, as well as that of the uterine and ovarian veins presented transverse wrinkles; but the latter were not so thick as the canal, had no false membranes, and became insensibly whiter as they approached the uterus. The uterine veins were much less numerous on the left than on the right side, but had, throughout, the same structure. There was no tumour on the left similar to that on the right side, nor was any pus found in the interstices of the fibres of the uterus. The ovaries presented nothing remarkable. The vena cava inferior did not contain the smallest quantity of pus, and all the cellular tissue of the pelvis was in the natural state. The bladder was very small, its mucous membrane of an orange colour, of the usual thickness and consistence, and covered with a layer of yellowish, homogeneous pus. The mucous membrane of the small intestines was pale, thin, and as soft as mucus, throughout its whole extent; that of the large intestines was universally red, a little thickened, and as soft as that of the small intestines, having in some points a decidedly granulated appearance.

The remainder of the dissection, which is detailed at length, we do not think it important to give. M. Louis conceives that in this example the inflammation of the veins preceded that of the uterus. The circumstance of no pus being found in the vena cava is explained by the inflamed vessels having become elongated cysts. The different appearance of the mucous membrane of the bladder and that of the intestines in high states of inflammation, will have been observed by the reader. The connexion of the principal lesions with the symptoms during life, present numerous circumstances of interest.

XV. *Discovery of two Canals of a peculiar kind in the Vagina and Uterus.*

DR. GARTNER, of Copenhagen, when dissecting the uterus of a cow, has found two canals of a peculiar kind, which are not mentioned by modern anatomists, commencing in the vicinity of the Fallopian tubes, and opening into the vagina close to the meatus urinarius. They also appear in the sow, and exist in these animals at all ages, not being confined to the condition of gestation.

In the sow, these canals begin by two openings on the sides of the orifice of the urethra, and proceed obliquely from within outwards, and in an ascending direction, in the thickness of the vaginal parietes, receiving lateral branches in their course, which proceed from the collection of small glandular bodies in their

neighbourhood, of which the mass presents an appearance having somewhat the resemblance of the pancreas. Their size diminishes, as fewer of these little lateral canals communicate with them, and particularly as they approach the Fallopian tubes. Though their existence is constant, their appearance is variable; as they appear more developed some time after conception. In the uterus of a sow, which contained two fetuses of two or three inches in length, the diameter of these canals was more considerable, and they were even prolonged in the substance of the broad ligaments of the uterus to within a few inches of the ovaries, where they appeared to terminate in several small glandular granulations: this prolongation of the canals was very evident; their aspect was opaque and whitish, but they were easily injected, and considerably distended by mercury: in many points they were greatly contracted, and in some appeared to be quite obliterated.

‘ In the cow, the vaginal orifice of these canals is wider, and placed more forward, by the side of the meatus urinarius, thus forming a dilatation which is gradually contracted: the canals are continued along the lateral parietes of the vagina, almost as high as the orifice of the uterus, where they appear to be suddenly interrupted; but they are found, when attentively examined, to penetrate into the substance of the neck of the uterus, and again to appear upon the uterus, as if they were gradually renewed on its surface: they are then carried superiorly as far as the Fallopian tubes, along which they extend to within some inches of the ovaries. These vessels uniformly exist along the whole of this course: in some young cows, the uterine portion of the canals is so delicate as to appear impermeable; in others, on the contrary, it is more or less dilated, and filled with a gelatinous and tenacious humour, having small dilatations of the appearance of hydatids. The portion of these canals, corresponding to the neck of the uterus, is subject to many varieties, resulting especially from the age and the state of gestation of the animal. The vaginal and uterine portions are generally isolated with respect to one another; but a communication seems to be established through the medium of little glandular bodies placed on the neck of the uterus: sometimes instead of these little bodies there is a true canal, analogous to a common excretory duct, dilated laterally, in the parietes of which numerous sanguineous vessels are ramified: this is very apparent in the adult cow. The glandular swellings (or those which have the appearance of being glandular) observed in this region, are sometimes very marked, and contain a gelatinous fluid. The canals are seldom equally developed on both sides of the uterus: most frequently a canal is found on one side only; and on the other, the glandular looking granulations.’

‘ It is very probable that these two canals, or rather these two organs, have some influence on conception and gestation. Galen, in the article entitled, *De dissect. vulvæ*, c. ix., seems to allude to something analogous to this anatomical fact. Régner de Graaf (*Opera Omnia*, p. 212,) seems to have suspected the existence of

similar organs in the uterus of women. The fasciculi of muscular fibres, described by M. Cuvier as seen in the cow, extending from the ovaries to the neck of the uterus, are probably to be referred to this structure. Haller says nothing decided on the subject; but Malpighi (*Epist. ad Spon*, p. 26,) seems to have been acquainted with it.—(*Arch. Gén.*, from the *Annali Univ. of Omodei*.)

XVI. On the Anatomy of Old People.

Is a note on this subject in the Archives Générales, by M. Breschet, we find the following observations :—

‘ Professor Lallement long since took notice of a particular state of the neck of the uterus and os uteri, in aged women—a peculiar prominence into the vagina, which might easily be mistaken for a state of disease.

‘ M. Mayer has made the following remarks, after examining the bodies of women of from eighty to one hundred years of age. The ovaries were always found more or less in a state of atrophy, hard, and as if scirrhus, filled with small hydatids or hydatiform vesicles, which in some subjects wholly supplied their place. Sometimes, instead of these, a cartilaginous body was found. The Fallopian tubes are almost always obliterated, and the obliteration begins in the middle, and extends from thence to the two extremities. The disposition of the uterus itself is very remarkable; its cavity is divided, in women of seventy or eighty, into two parts, by a transverse partition formed in the highest part of the cavity of the neck, at the beginning of the cavity of the body of the uterus. There is a contraction of the organ in that situation, between its body and its neck, which is visible externally; and when this is examined, the parietes of the uterus are found to approach and join by a more or less complete kind of symphysis, so that at a still more advanced age there is an actual partition. In a less advanced period of life this partition is not only weaker, but interrupted by narrow openings, or by oblique shaped canals: these openings are all finally closed so completely, that neither water nor mercury, nor even air, can be passed from one cavity to another. This kind of *septum* acquires a thickness of from two to four lines.

‘ Of the two cavities here spoken of, that of the uterus is the most considerable, and its greatest extent is towards the fundus. The cavity of the neck has an elongated oval form; near the partition it is uneven; and it communicates by an opening with the vagina. The internal surface of the upper cavity is smooth; that of the neck presents wrinkles and prominences; both contain a whitish mucus, which is more abundant in the upper than in the lower division. Hydatids, filled with a reddish or bloody serum, are not unfrequently found in both cavities, but particularly in the upper, and these are often very numerous.’

M. Breschet considers that there is some analogy between this division of the uterus in old women, and the contraction which divides the stomach in some subjects into two distinct parts, asserting, as it would appear, for the purpose of establishing this analogy,

that such contraction is most common in old people. He promises some further remarks on this subject, relating particularly to the state of the nervous and muscular system in old people; and if he should perform his promise, we trust he will write less diffusely, since the endless repetitions, in the original, from which we have abbreviated the above observations, are not only unnecessary, but are often not very intelligible.

XVII. *External Application of Medicines.*

M. LESIEUR has the satisfaction to be considered by some of the Parisian critics as the author of a great discovery. He conceives we have been too much addicted to the common method of administering medicines internally, and advises their introduction by the skin. His illustrations are particularly felicitous: applied to the skin, *when a blister has removed the epidermis*, the acetate of morphine, he says, cures *chronic catarrhs*, which it would not do if taken into the stomach. The blister of course does nothing.

There can be no question of the efficacy of many medicinal agents when externally applied. Instances of temporary and partial paralysis have occurred, from the application of belladonna to a blistered surface for the cure of neuralgia; and M. Serres has published the particulars of a case of obstinate vomiting, which was not relieved by a blister to the epigastrium, but ceased immediately when half a grain of the acetate of morphine was applied to the part vesicated, in the form of a very finely levigated powder. Cases may occur where such a practice would be very desirable, either to allay spasmodic action of the stomach or intestines; nor is it improbable that benefit might accrue from it in the paroxysms of asthma.

XVIII. *On the Diet best adapted for Persons labouring under Tabes Mesenterica.*

‘WE know nothing of the operation of the mesenteric glands, nor of the part they perform in the scheme of digestion; but we are assured, by experience, that when they become diseased, emaciation and atrophy follow. The dietetic plan which I am about to propose in such cases, was neither suggested, nor am I aware that it can be successfully supported, by physiological theory; although, if it were my object to adduce an hypothesis, I think I might be able to give it the air of plausibility. My conviction of the utility of the treatment, however, rests exclusively upon the basis of experience. I have uniformly found a vegetable diet injurious in such cases, while one entirely composed of animal matter has proved beneficial; but in order to ensure such a result, the meals should be scanty, and in quantity short, of what the appetite may require; the intervals, also, between the repasts should be lengthened. In this way are the unwilling absorbents induced to perform their duty with greater promptitude and activity; but it is a practice which, from the extreme anxiety of friends and relatives, the feelings of craving and

hunger expressed by the patient, and the mistaken but universal prejudice respecting diet, it is always painful to propose, and generally difficult to enforce: where, however, circumstances have given me a full and unreserved controul, the advantage of the plan has been most decisive. In affections of this kind, the stomach rarely loses its powers; and it is less an object to provide easily digestible, than highly nutritive food. I have a patient of this description, who has derived much advantage from a diet composed principally of animal fat; and I have frequently noticed a sort of instinctive desire for rich and concentrated nourishment, which has not produced the ill effects which it undoubtedly would have occasioned in a simple dyspeptic disease.—(*A Treatise on Diet*, by J. A. Paris, M. D., &c.)

XIX. Of the Diet of Pulmonary Invalids.

In tubercular affections of the lungs, it has been often disputed whether the low diet, so universally prescribed in such cases, is that which is best calculated to arrest the progress of the disease. From my residence at Penzance, and from the various cases which have fallen under my care, in consequence of having there practised, I may, without the risk of incurring the charge of presumption, assert that few physicians have possessed greater opportunities of experience in this complaint than myself. The conclusions to which this has led me may be expressed in a very few words. Where there exists, in the earlier stages, great lassitude, coldness of the extremities, a quick but weak pulse, a tightness across the chest, as if it were confined by cords, but unaccompanied with acute pain in the side, a strictly vegetable diet is injurious. I have in such cases prescribed a regimen similar to that which I have above proposed for the cure of mesenteric affections; and I have certainly found it to be useful. To assert that I have cured an organic disease in the lungs would be more than foolish; but I have certainly arrested its progress in some cases, and I have restored others to perfect health, who had been gradually declining under a different treatment. Where a permanent cure has been effected, the presumption is, that the lungs were never actually deranged in structure; but the symptoms were of a nature to have justified such a conclusion. The medicine upon which I place the greatest reliance in such cases, is the extract of hemlock; and were I to express the extent of my own confidence in its powers, I might, perhaps, fall into the dangerous error, against which I have so strongly protested in my *Pharmacologia*—that of bestowing such extravagant praise upon a remedy as to detract from its reputation. I shall, therefore, only observe, that this remedy tranquillizes the irritation of the lungs to a greater degree than any other medicine with which I am acquainted; but in order to ensure so desirable an effect, it must be given in much larger doses than those in which it is usually administered. I usually commence with a dose of five grains three times a day, which I gradually increase to ℥j. or even more: it will generally produce a slight giddiness, nausea, and a

tremor of the body; a peculiar heavy sensation is also experienced about the eyes, and a tightness across the forehead; and the bowels frequently become relaxed: unless some of these sensations are produced, I consider that the remedy has not had a *fair trial*. The following is the formula for the preparation of the mixture which I have found to be so highly serviceable. If I am required to explain the *modus operandi* of each ingredient, I might, perhaps, fail in inspiring that confidence in its utility, to which I am convinced it is entitled. The practitioner must therefore rest satisfied with the results of experience, and accept facts in the place of theory.

‘R Extract. Conii, et
 Extract. Hyoscyami, aa ʒij.
 Mucilaginis Acaciæ, fʒij.
 Tere simul, et adde
 Liquoris Ammoniacæ Acetatis, fʒj.
 Aquæ puræ, fʒivss.
 Vini Ipecacuanhæ, fʒj.
 Syrupi Rhæados, fʒij.
 Fiat mistura, de qua sumantur cochlearia duo ampla ter quotidie.’

[*A Treatise on Diet, by J. A. Paris, M.D., &c.*]

XX. *Of the Preparation of Extracts.* By J. HOULTON, Esq.,
 F.L.S., &c.

THE expressed juices of medicinal plants, evaporated by simple exposure to the open air, in dry warm weather, and in shallow vessels of earthenware, form more elegant preparations, and more effective medicines, than the extracts are which are manufactured from the same plants after the processes laid down by the College of Physicians in the Pharmacopœia.

The extract of the conium maculatum, thus prepared, has not shewn crystals on its surface in twelve months, and it has retained its sensible and medicinal properties extremely well.

If this extract be prepared in the shade, the fine green colour is beautifully preserved; and if the inspissation be carried nearly to dryness, the rich colour will be retained for a year at least.

The expressed juice of the root of the leontodon taraxacum, treated in this way, affords an article very different in its sensible qualities, and very superior in its medicinal power to what is sold in the shops as extractum taraxaci. In this extract, evaporation must be carried on until the mass be dry, or it will not keep. Its properties, when prepared in this manner, are deobstruent, anodyne, and demulcent, and in large doses it is aperient.

XXI. *Morbid Anatomy.—The Uterus Wanting.*

‘M. RENAULDIN presented to the French Academy of Medicine, in February, a preparation of the female organs of generation, where the uterus was wanting. The subject of it was fifty-two years of age, and died of cancer of the stomach: she was of very small stature, not exceeding three feet and a half; her understanding but

little developed, and she had never menstruated, nor had the mammæ ever been formed. The external parts of generation were well formed, an imperfect hymen existed, and when the finger was passed to the extremity of the vagina, a small tubercle of very little sensibility was found in place of the neck of the uterus. Between the bladder and rectum, instead of a uterus, was a sort of resisting band (*cordæ*), of the thickness of a common quill, communicating on one part with the vagina, and on the other with the Fallopian tubes, which were much widened where they joined the canal, and formed there a kind of little sac: scarcely any rudiments of the ovaries existed. When the vagina and the small canal by which it was surrounded were slit up, the first was seen to be properly formed; and the latter, which was about an inch in length, was evidently shewn, by its consistence and organisation, to be the imperfectly formed neck of the uterus, the body and fundus of the organ being wholly absent.'—(*Arch. Gén.*)

XXII. Case of local Self-Combustion.

'MARGARET FREDERICA CATH. HEINS, of delicate constitution, and florid complexion, had for some time past been affected with pain of the head and giddiness to such a degree, that she was compelled to give up her employment as housemaid, and apply herself to something which required less exertion, as that of sewing. Her menses had appeared in her thirteenth year, and continued since, but in very slight quantities; she had also had the diseases to which children are subject, such as measles, small-pox, &c. without any bad consequences. On the 21st of January, 1825, as she was occupied in sewing, she felt an extraordinary sensation of heat all through the body, and in the fore-finger of the left hand a violent burning sensation; at the same instant there proceeded from the same finger a blue flame, about an inch and a half long, which emitted a peculiar sulphureous smell. The flame could not be extinguished, either with water, or by means of a wet towel put round the finger. On putting the hand into water, the whole hand appeared on fire. The patient went in a great hurry from the house in which she was at work to her home, and wrapped the hand in her apron: this, together with her clothes, were considerably burnt, but still the flame was only perceptible in the dark. On her return home, she dipped her hand in milk, and continued this during the night, by which means the flame was extinguished; the burning heat in the left hand, together with the occasional emission of the sulphureous smell, continued. After a venesection, and the use of some medicines, the patient got better; but she always retained a burning sensation in the left fore-arm, which very often emitted a smell like that of sulphur.

'On the 25th of February she was admitted into the hospital. The internal surface of the middle of the hand was at this time covered with small bladders, and on one or two of the fingers there was the same appearance. The bladders somewhat resembled those observed in gangrene; they were not, however, so rapid in their

course, and the redness about the circumference was also of a darker colour. Friction with wool produced in the fore-finger a sensation of burning. The appetite was slight; the thirst considerable; pulse tranquil; and, independent of pain in the fore part of the head, there was no mark of a disordered state of body. In the nights of the 26th and 27th the patient slept well; the bladders did not spread any farther, but the sensation of heat still continued in the left hand, and the motion of the volar surface, and the fingers, occasioned great pain. In this hand the thermometer was at 87° Fahr.; but in the other hand, on the contrary, only at 70. Several experiments were made with different combustible substances, which, however, shewed nothing worthy of notice. Also the best electrometers remained unacted upon, whilst the patient was placed on the isolated stool. Bad taste in the mouth, and a bad appetite, were now the only symptoms of a deranged state of health.

' March 1st.—Electric sparks were drawn from the points of the finger of the left hand, which, however, caused the patient great pain. On the following day, the burning shewed itself in the points of the fingers of the same hand, particularly in the fore-finger, much stronger than before. No fresh bladders made their appearance. Between this and the 5th of May, she remained just in this state; the increase of temperature in the left hand still continued, with the sensation of heat, and the occasional burning. In other respects the girl was healthy; and feeling a desire to resume her avocations, she was discharged. This is the simple observation of a most remarkable case, which, in reference to the absence of the usual circumstances in self-combustion, particularly the *non*-destruction of the affected part, is the only one of the kind yet known. In the only analogous case, in a man where the arm was but partially attacked with fire, so that he could call persons to his assistance, and shew them the phenomenon, there was all of a sudden pain in the arm, like that from the blow of a stick; and at the same time, he observed a spark which burnt the shirt to ashes.*—(*Extracted from the Journal of the Hamburg Hospital, Hecker's Annalen, August, 1825.*)

XXIII. *Remarks on the Human Stomach.* By SAMUEL THOMAS VON SOEMMERING.

' Soon after the new edition of my programm on the corporeal difference between the Negro and European, Mr. Billmann, in Cassel, drew my attention to the fact, that, in respect to the stomach, there is also a great difference between these two races of mankind. The form of the stomach altogether appears, in the negro, rounder, or at least shorter, than in the European. If we compare, in the

* ' K. A. Rudolphi, *Grundriss der Physiologie*, bib. i. s. 212. See Pierre Aimé Lair sur les Combustions Humaines produite par un long abus des liqueurs spirituelles, Paris, 1800. Versuch über das Verbrennen menschlicher Körper, &c.'

natural state, the stomach of a negro, fourteen years old, and of an European girl of twelve years, we observe this difference, particularly at that part commonly called its *cul de sac*. This blind sac is evidently more globular in the negro, and, above the junction of the œsophagus, more convex than in the European. A similar but still more remarkable roundness of the stomach may be observed in the stomachs of apes, and which may be seen in Dambenton's excellent plates to Buffon, just as it is found in the natural state. Thus, also, in the form of one of the most essential organs, namely that of the stomach, the negro appears more to resemble the ape than is the case with the European. I am not aware that any one has noticed this difference before myself. Neither Charles White, in his *Account of the regular gradation in Man*, nor William Lawrence in his *Lectures on Physiology, Zoology, and the Natural History of Man*, which, up to the present time, is the most perfect work on the differences of the human race, have touched this subject. Whether this remarkable difference can be looked upon as proof in support of the opinion of several natural historians, which is every day gaining more ground, viz. that mankind must have arisen from more than one original stock, and in what respect I shall, therefore, be obliged to change the opinion which I have before given, I will for the present pass by. But I must here formally protest against this new discovered corporeal difference being used as a plea in behalf of the cruel treatment which the Europeans continue to inflict on the negroes.

Another observation on the human stomach regards the description given by Sir E. Home,* of the contraction in the centre, which appeared to him so remarkable, that he therefore divided the stomach into the pyloric and the œsophageal halves. It is quite true that this contraction in the stomach is met with as Meckel has mentioned,† and which I have often observed myself. But as this appearance, as well as I recollect, only shows itself in the female subject, and as Home has drawn it from one female body only, I regard it as immaterial, or at least deviating slightly from the usual state. I am greatly mistaken if it is not the effect of the tight lacing,‡ particularly from the pressure of the breast bone of the stays; for such a bone, laced only moderately tight, presses just on the middle of the stomach, so as to divide it into two parts. This machine, made either of wood, bone, or steel, works like every other mechanical irritation applied to any part of the living viscera. This must also be much more the case in the female stomach, as I have already remarked in my Splanchnology,§ as it is distinguished by

* Philosophical Transactions for 1817, part ii., pl. xx. is evidently a rare malformation, either hereditary, or the result of disease.

† Deutsches Archiv für Physiologie, 4 Band. 1818, p. 130.

‡ Preisschrift über die Schädlichkeit der Schnürrbrüste, Leipzig, 1788. See Soemmering in the enlarged edition. Berlin, 1793.

§ In so far must C. G. Ackerman's *Dissertatio de discrimine sexum præter genitalia*, Moguntia, 1788. 'Intestinorum tractus nullum sexus discrimen ostendit,' be altered.

its length from the broad roundness of the male stomach. But if such a contraction of the stomach belonged to its natural state, there must be a disposition to it, at least in some degree, apparent in the stomachs of children, in which, however, not the slightest trace of it is to be found.

‘ The third observation on the human stomach concerns its lower end, or the *pylorus*. On examining the proper opening of the pylorus, which is most readily and easily done when the stomach is dry, and has been moderately distended with air, it generally appears more or less elliptical, seldom circular, consisting of a ring, occupied by concentric circles, which are different both as to their size and the direction which they take. Sometimes the pylorus, that is, the fold or ring which forms it, is broadest at the posterior surface of the stomach, and towards the anterior surface is narrowed in the form of a projecting fold. The longest diameter of this opening extends obliquely from before backward; the smallest diameter, on the contrary, from above downwards, or from the right to the left side, or the lesser to the larger curvature. Sometimes the ring of the pylorus is, on the whole, remarkably broader, and its opening somewhat smaller. It has, therefore, its greatest breadth on the smaller, and the largest on the greater curvature. Its elliptical opening appears with its longest diameter between the larger and less curvatures, with its smallest diameter, on the contrary, from behind forwards, or in the direction between the anterior and posterior surface of the stomach. Sometimes the ring of the pylorus is broader, and its opening proportionally smaller; then its greatest breadth is not on the small, but on the greater curvature, and the longest diameter of its opening extends not from the right to the left, but from the anterior to the posterior surface of the stomach. Sometimes the ring of the pylorus is, proportionally to the size of the stomach, very broad, and its opening, at the same time, very small. Between these three or four remarkable differences in the form of the pylorus, its other varieties may be properly classed; but as we have an excellent monography on this subject from Leveling,* and a good description of this part from Haller, I will confine myself to the notice of a construction of the pylorus which was first discovered by one of my pupils, Scheuzer. This is a ring or circle of glands contained in the fold of this part, which, on the careful removal of the peritoneum and cellular membrane, may be shown. I have had the honour of showing this ring to the Academy, both in the natural state, and in two engravings. The natural size, the peculiar form, the true situation, the peculiar connection, as well as the line of demarcation marked out by it between the end of the stomach and the commencement of the duodenum, may be best seen in a preparation which has been kept in spirits of wine, and will then be so clear as to supersede, now, on my part, a more detailed description. F. Magendie distinguishes † in the stomach *la partie*

* Diss. inaug. sistens Pylorum anatomico-physiologia consideratum. Argentorati, 1764.

† Précis Elémentaire de Physiologie, tom. ii. Paris, 1817, p. 72.

splénique and *pylorique*. At the pylorus, he says, the mucous membrane forms a circular fold, called the *pyloric valve*, and that a fibrous dense tissue is found between its plates, called by some authors* the *pyloric muscle*. This valve of the pylorus serves both to prevent the return of the matter contained in the duodenum into the stomach, as well as to keep the food and chyme in this viscus.—(*Memoirs of the Bavarian Academy of Sciences*, vol. viii. pp. 77—86.)

XXIV. *Treatment of Chilblains with the Chloride of Lime.*

'Is a very obstinate case of chilblains, in a person very liable to them, and in whom the whole back of the hands was covered with large ulcers, M. Lisfranc tried the effect of the solution of chloride of lime. A bit of cloth, spread with cerate, and perforated with many holes, was placed next the ulcers, and over this a compress of charpie, steeped in the solution. The dressings were renewed every twenty-four hours. In three days the superficial ulcers were cicatrized, and the whole of them healed before twelve days.'—(*Revue Médicale*, *Fevrier* 1826.)

XXV. *A case of the use of Pyroligneous Acid in Sphacelus.*

By T. Y. SIMONS, M.D.

'It was applied, in the proportion of one part of the acid to six parts of water, to the sloughing surface of a gangrene of the bladder, perineum, and scrotum, produced by incontinence of urine, and with the best effect: granulations arose, and the mortified parts separated, and gradually healed. In foetid ulcers it corrects the discharge.'—(*Carolina Journal of Medicine*.)

SECTION III. — INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. *State of the Sick Poor.*

THE subject of farming the parish poor, so fully treated of under this head in our Number for March, is gaining that attention which will doubtless eventually lead to reform. Publicity is the great remedy for all those evils by which the few are made gainers at the disadvantage of the many; and if there be any good reasons for the backwardness of professional men to look into this subject, such reasons ought now to be stated, either at the meetings held for the purpose of considering the subject, or by other methods. At present, those who do not belong to the profession, and yet whose attention is by any means attracted to the subject, must have great difficulty in reconciling the supineness of medical men with their general character for disinterestedness and philanthropy. A

* Magendie mentions the name of no individual author, but probably alludes to Abernethy. Vide *Physiological Lectures*, London, 1817, p. 178.

state of things exists by which the poorer part of the public are said to be grievously wronged; medical men are said to be parties to committing this wrong; the attention of people of influence is beginning to be turned to the subject—but medical men are silent. The inference that *might* be drawn from this conduct would, we are well convinced, be highly unjust to the profession in general; but at the same time, we should be glad to see all cause of suspicion removed. Our notice of Mr. Smith's pamphlet has been commented upon in several of the provincial papers; but if medical men mean to do any good in the matter, they must meet together, and express, by some public resolution, their opinion of the present plan of providing attendance on the parish poor, as well of the means of amending what is defective in it. Again, we say, that if medical men will *not* do this, it will, and must in the end be done without them. We are not bigots to Mr. Smith's plan, and have professed our readiness to receive any suggestions; but we say unreservedly, and we challenge contradiction in so saying, that the plan of farming the sick poor of parishes is a disgrace to the overseers, a degradation to the surgeons and apothecaries, and a cruel and monstrous injustice to the sick poor themselves.

We omitted to state in our last Number, that a meeting had been held on the 29th day of April, at the rooms of the Charitable Institution, in Sackville-street, to consider the propriety of establishing, what are termed by Mr. Smith, *Independent Dispensaries for the Poor*, the plan of which is stated in the last volume of the *REPOSITORY*, p. 206. Lord Althorp, Lord Suffield, and Lord Nugent attended this meeting, and several other highly respectable individuals; among whom were D. S. Dugdale and F. Lawley, Esquires, the members for Warwickshire, in which county the plan has already been, to a certain extent, acted upon, in a manner of which Dr. Chandler, the rector of the parish in which it has been done, expressed his great satisfaction. Lord Suffield and Lord Althorp intimated that the plan should be subjected to trial in the districts in which they reside.

The following resolutions were agreed to before the meeting separated:—

‘1st. That it appears to this meeting, that a frequent cause of the working classes being reduced to pauperism is the difficulty which they experience in defraying the expenses of medical and surgical aid, in times of bodily sickness and injury.

‘2dly. That it appears probable that the best medical and surgical aid might be placed within the poor man's reach, the number of paupers, and the amount of poor rates, be greatly diminished, and the health, comfort, and independence of the working classes, be materially promoted, were a system of mutual insurance against the expences of sickness and accident generally adopted by the poor.

‘3dly. That the plan of Mr. Smith, which has been already successfully reduced to practice at Southam, appears to the meeting calculated to realise the benefits of such mutual insurance.’

II. *New Mode of Percussion.*

M. Piorry proposes a new method of performing percussion of the chest. It consists in making the percussion upon a little circular plate, of the wood of the fir employed by musical instrument makers, of a line in thickness, and one inch and a half in diameter, supported by a little bent handle. By these means a much stronger sound is obtained, insomuch that the difference of sound becomes perceptible through the clothes of the patient; the person examining is also able to employ more force than in the ordinary method, and to employ sonorous bodies instead of the fingers, as well as to apply the percussion more precisely to the surface, whilst the thorax is protected from the effects of the impulse. By an experiment made in this way on the inflated cheek, M. Piorry demonstrated that a considerable sound was elicited through the plate, where common percussion produced little or no sound. He also obtains different sounds in different points of the abdomen, according as the point on which the plate is placed corresponds to gases, liquids, or solids; and he is assured that in this way the place occupied by each viscus may be ascertained within a line, and that consequently this means may be usefully applied in the exploration of several maladies, as for instance, peritonitis, ascites, hernia, &c.—(*Archiv. Gén. de Méd.*)

III. *Hufeland on the Radix Caincæ, as a new remedy against Dropsy.*

THE *Materia Medica* has acquired a very valuable acquisition in the radix caincæ, an important remedy against dropsy. In a letter from M. von Langsdorf, to Professor Kluge, on the use of the radix caincæ, (*chiococca racemosa*, Martii,) we are informed that the root of this plant is celebrated in Minas-Geraes, in Brazil, as a very efficacious medicine. Its properties are a drastic, not debilitating, but tonic purge, a good diuretic, and a most active emmenagogue. On account of its pungent and nauseating smell and taste, it often causes vomiting, without any emetic principle having been yet discovered in it. In irritation of the nerves, and hysteric cases, this medicine has also been found efficacious; but its principal property is, that the root has been proved to be a radical remedy in dropsy. It is used in the form of an infusion,—about two drachms of the root to a pint of boiling water, and allowed to rest over night,—and taken in the form of tea once or twice a-day; or to commence with two table spoonsful, three or four times a-day, of a decoction of two drachms of the root boiled in a pound and a half of water down to eight ounces.

It appears, therefore, that this medicine belongs to that class of anti-hydropic remedies, which, by their resinous drastic qualities, produce alvine evacuations, as well as a secretion of urine, as, for instance, gamboge, elaterium, colocynth, bryony.'—(*Hufeland's Journal*, February 1826.)

IV. *Diseases of Artizans.*

THE subject of the prize-essay in the Royal Academy of Medicine of Paris, for 1828, is 'To ascertain, by positive observation, the relative hurtfulness to the economy of emanations resulting from the

exercise of certain trades; and to find out and make known the means of remedying their effects.' The essays are to be sent to the Bureaux of the Academy, Rue de Poitiers, No. 8, previous to the 1st of February, 1828.

V. *Sulphate of Quinine.*

'ALTHOUGH the sulphate of quinine is commonly administered in small doses of two, four, or at most six grains, and that with the intention of avoiding the production or aggravation of any internal inflammation, which is doubtless frequently a cause of intermittent fever, we may however remark, that in certain constitutions, the only way of obtaining the full efficacy of this medicine is to cause it to be taken in doses of twelve, sixteen, twenty, or twenty-four grains: by this mode of administration alone can we in such cases succeed in cutting the fever short, and thus prevent the development of that irritation which is so justly apprehended, and which often results from the repetition of the paroxysms, and the inadequacy of the means employed to prevent it.'—(MARTINET, *Mémoires et Chinque des Hopitaux, Rév. Méd.*

VI. *Laennec on Diseases of the Thoracic Viscera.*

PROFESSOR LAENNEC has just published the long expected second edition of his valuable work, which we find greatly enlarged, and the arrangement much improved; the treatment is also added. In its present form, it is, beyond all comparison, the most comprehensive and complete treatise on the diseases of the thoracic viscera which exists. Dr. Forbes, we are happy to find, is translating it.

Clinical Report of the most prevalent Diseases during the preceding Month.

THE month of June has been very fine, dry, and warm: vegetation has suffered much from want of rain; there have, however, been passing storms, with thunder and lightning.

Few months have been more completely free from epidemic disease than June; and, generally speaking, it may be termed a healthy season.

The more remarkable features have been a great aggravation in consumptive symptoms, and more frequent headaches, with a tendency to paralytic attacks, and apoplexy. The very warm weather seems to have had a most unfavourable effect upon the former; the breathing has suddenly become more difficult, the cough more troublesome, the night perspirations far more profuse, and emaciation and extreme debility have made very rapid progress. We have not indeed, for several years, seen within so short a space so many fatal terminations of pulmonary consumption.

The disorders of the head have exhibited nothing peculiar. They have appeared under the common forms of headach, giddiness, noise in the ears, &c., and have been most successfully combated by free venesection. The digestion has, in most cases, been much disordered, and required great attention.

An instance has presented itself to us of the good effect of tonics

in dropsy, after very copious bleeding. The patient, a young woman of twenty-one years of age, was completely anasarcaous, with evident fluctuation and tension of the abdomen. The fœces were white, and very offensive: the urine very scanty. The breath was short, and she had much cough: her debility was very great. She had been bled repeatedly by order of another practitioner, and latterly with aggravation of the symptoms. The practice pursued was, a powder of calomel and jalap, twice a day, with the *mistura ferri comp.* Under this plan the abdomen is quite reduced. The anasarca is confined to the feet and ankles; her breath is nearly free; her strength greatly increased; and her whole appearance more healthy. A fortnight only has elapsed since we first saw her.

The case of neuralgia mentioned in the last report went on well till two days ago, since which time the pain has slightly returned. His digestion has become impaired at the same time. He is still pursuing an alterative system.

LITERARY INTELLIGENCE.

In the Press, a Concise Historical View of Galvanism, with Observations on its Chemical Properties, and Medical Efficacy in Chronic Diseases. By M. La Beaume, Medical Surgeon, Electrician, F.L.S., &c.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. A Treatise on Diet; with a view to establish, on Practical Grounds, a System of Rules for the Prevention and Cure of the Diseases incident to a Disordered State of the Digestive Functions. By J. A. Paris, M.D., F.R.S., Fellow of the Royal College of Physicians, &c. &c. 8vo. Pp. viii.—307. Underwoods. London, 1826.

2. An Essay on Headaches, and on their Cure. By Walter Vaughan, M.D., of the Royal College of Physicians in London. 8vo. Pp. 252. Longman. London, 1826.

3. Experimental Researches on the Influence exercised by Atmospheric Pressure upon the Progression of the Blood in the Veins, upon that Function called Absorption, and upon the Prevention and Cure of the Symptoms caused by the Bites of Rabid or Venomous Animals. (Dedicated, by permission, to his Majesty.) With an Appendix, containing the Original Reports of Baron Cuvier, and of Professors Dumeril and Laennec, to the Royal Institute of France, and to the Royal Academy of Medicine of Paris, &c. By David Barry, M.D., Knight of the Order of the Tower and Sword; Member of the Royal College of Physicians of London; First Surgeon to the Portuguese Army; Surgeon to the Forces, &c. 8vo. Pp. xvi.—175. Underwoods. London, 1826.

4. A System of Anatomical Plates, accompanied with Descriptions, and Physiological, Pathological, and Surgical Observations. By John Lizars, F.R.S.E.; Fellow of the Royal College of Surgeons; Corresponding Member of the Medical Society of Emulation of Paris; and Lecturer on Anatomy and Surgery. Edinburgh (Folio and Octavo). Part X.—The Organs of Sense, and Viscera. Eight Plates. Pp. 66. Edinburgh, 1826.

5. Observations on the Artificial Mineral Waters of Dr Struve, of Dresden, prepared at Brighton, with Cases. By William King, M.D.; Fellow of the Royal College of Physicians, London; late Fellow of St. Peter's College, Cambridge. 8vo. Pp. 55. 1826.

6. An Essay on Bathing; with Remarks on the Efficacy and Employment of the Mineral Water at Ashby-de-la-Zouch and Moira; in which are introduced several interesting Cases, &c. By W. R. Cubitt, M.D. 12mo. Pp. 90. 1826.

THE METEOROLOGICAL JOURNAL,

From the 20th of MAY, 1826, to the 19th of JUNE, 1826.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50 High Holborn.

| May. | Moon. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|------|-------|-------------|---------|------|------|---------|----------|------------------|----------|---------|----------|------------------|---------|----------|
| | | | 9 A. M. | Max. | Min. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 9 P. M. | 10 P. M. |
| 20 | | | 56 | 63 | 47 | 29 | 63 | 29 | 85 | 73 | 63 | SE | NE | Clo. |
| 21 | ○ | | 55 | 67 | 50 | 29 | 90 | 30 | 03 | 74 | 69 | N | N | Fine |
| 22 | | | 60 | 72 | 49 | 29 | 93 | 29 | 93 | 66 | 66 | NNE | ENE | |
| 23 | | 53, | 64 | 70 | 53 | 29 | 85 | 29 | 75 | 60 | 70 | NE | NNW | |
| 24 | | | 57 | 66 | 52 | 29 | 70 | 29 | 66 | 76 | 87 | NNW | NNE v. | Ovest |
| 25 | | | 54 | 59 | 53 | 29 | 57 | 29 | 52 | 87 | 90 | NNE | sRain | Rain |
| 26 | | 15, | 58 | 62 | 54 | 29 | 55 | 29 | 66 | 82 | 80 | E | E | Fair |
| 27 | | | 60 | 66 | 52 | 29 | 68 | 29 | 75 | 77 | 84 | ENE | ENE | Clo. |
| 28 | ☾ | | 61 | 64 | 51 | 29 | 74 | 29 | 67 | 71 | 84 | NNE | N | Show |
| 29 | | 135, | 52 | 55 | 50 | 29 | 68 | 29 | 76 | 82 | 94 | N | NNE | Rain |
| 30 | | | 53 | 55 | 51 | 29 | 75 | 29 | 80 | 94 | 95 | NW | NE | Rain |
| 31 | | | 54 | 59 | 57 | 29 | 80 | 29 | 75 | 88 | 89 | ENE | E | Ovest |
| 1 | | 56, | 53 | 61 | 52 | 29 | 74 | 29 | 74 | 84 | 86 | NE | NNE | Fair |
| 2 | | | 53 | 56 | 49 | 29 | 75 | 29 | 85 | 90 | 84 | NE | N | Rain |
| 3 | | | 63 | 65 | 52 | 29 | 92 | 30 | 05 | 67 | 63 | NW | NW | Fine |
| 4 | | | 64 | 68 | 54 | 30 | 06 | 30 | 08 | 64 | 76 | W | WNW | Fine |
| 5 | ● | | 63 | 67 | 55 | 30 | 14 | 30 | 18 | 66 | 65 | NNE | ESE | Fine |
| 6 | | | 59 | 71 | 59 | 30 | 16 | 30 | 08 | 68 | 69 | SE v | NNW | Clo. |
| 7 | | | 62 | 67 | 57 | 30 | 09 | 30 | 09 | 67 | 79 | NW | NNE | Fair |
| 8 | | | 63 | 69 | 55 | 30 | 10 | 30 | 05 | 66 | 64 | NE | NNE | |
| 9 | | | 68 | 75 | 57 | 29 | 89 | 29 | 84 | 63 | 69 | NE | NNE | |
| 10 | | | 62 | 74 | 56 | 29 | 83 | 29 | 90 | 67 | 76 | ENE | N | |
| 11 | | | 63 | 74 | 60 | 29 | 94 | 30 | 02 | 73 | 75 | NNE | SE | Fine |
| 12 | | | 68 | 77 | 63 | 30 | 10 | 30 | 13 | 68 | 68 | NE | SE | |
| 13 | ☾ | | 74 | 79 | 63 | 30 | 12 | 30 | 11 | 59 | 66 | NW | W | |
| 14 | | | 69 | 80 | 63 | 30 | 11 | 30 | 08 | 67 | 66 | W | W | |
| 15 | | | 72 | 78 | 55 | 30 | 02 | 29 | 95 | 60 | 62 | W | NNW | |
| 16 | | | 64 | 68 | 55 | 30 | 15 | 30 | 12 | 55 | 60 | N | SSW | Clo. |
| 17 | | | 66 | 73 | 62 | 30 | 24 | 30 | 15 | 60 | 64 | NW | WNW | Fine |
| 18 | | | 75 | 78 | 67 | 30 | 15 | 30 | 18 | 62 | 63 | NW | N | Fine |
| 19 | ○ | | 73 | 75 | 59 | 30 | 24 | 30 | 30 | 64 | 67 | E | SSE | Clo. |

The quantity of rain fallen in the month of May was 2·35 inches.

NOTICES TO CORRESPONDENTS.

THE Readers of the MEDICAL REPOSITORY may perceive, from this Number, that it is our intention to extend our monthly limits to at least six whole sheets, or 96 pages, and to print the greater part of the work in a closer and more uniform type than formerly, which will be equal to a still farther extension of the limits of the work.

Several Communications are received, and are under consideration.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

Correspondents, and authors of works, or of papers in other Journals, who may wish to have their productions noticed, may send them under cover (post paid) to the Editors, 1 Bulstrode Street, Cavendish Square, or to the Publishers, Fleet Street.

The Index to the preceding Volume will be delivered with the next Number.

Communications, and Works for Review, are requested to be addressed (post-paid) to the EDITORS, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 152.

AUGUST 1, 1826.

VOL. XXVI.

No. XIV. — NEW SERIES. — VOL. III.

PART I. REVIEW.

I.

OF DIET.

A Treatise on Diet; with a View to establish, on Practical Grounds, a System of Rules for the Prevention and Cure of the Diseases incident to a Disordered State of the Digestive Functions. By J. A. PARIS, M.D., F.R.S., Fellow of the Royal College of Physicians, &c. &c. London. Underwoods. 1826. 8vo. Pp. 307.

Few inquiries have, in all ages, afforded a more ample field for the excursions of fancy than that which relates to the diet best adapted to man, either in health or disease. On no subject, perhaps, has more nonsense been written, or spoken with greater seriousness. The authors of systems have seemed to contract their views, so as to exclude all the evidences of adaptation and design which are visible in the works of nature, and all consideration of the human frame and structure, and have thus, from time to time, laid down rules for diet either insignificant, or absurd, or hurtful, and seldom indeed of any real value to mankind. Every speculatist, and every visionary, has professed to live according to nature; but their ideas of nature have been very often limited to her operations as seen in the instincts of the lower animals, or at least in the habits and customs of savages; and, with very few exceptions, scarcely an author has yet appeared whose system could have been followed in all its parts by any rational and civilized being.

These objections do not apply to Dr. Paris: he is a physician practising in London in the nineteenth century, and a man of the world. He writes for persons who must live in society, and exercise their minds, as well as their bodies,

VOL. III. NO. 14. — NEW SERIES.

N

among intellectual and highly-cultivated beings ; he, therefore, does not advise us to do any thing violently eccentric, to graze with the beasts that perish, or to lie on a rug by the fire after eating : he does not tell us that animal food is forbidden, or that vegetables should never be mixed with it : he does not restrict men to water, and exclude all the refreshing and delightful beverages which human ingenuity and industry have been permitted by Providence to create from the varied productions of the earth : he does not advise us to distend our stomachs with gruel before going to bed ; or, forgetting the very end of our being, to waste our precious time in hourly endeavours, by means of weighing and measuring the ingesta and egesta of our vile bodies, to add a cubit to our stature. For these reasons, his rules, if not more likely to be followed than those of other dieters, are certainly more deserving of being followed.

The importance of diet, either as a means of preserving or restoring health, is too obvious to require being dilated upon ; but a consideration of the variety of human constitutions will shew us that it is no more possible to lay down infallible rules which shall suit all, than to compound a medicine which shall cure all diseases ; and, after stating that this truth also is not overlooked by the author before us, we shall end our prefatory remarks, and endeavour to make the reader acquainted with the plan of his publication.

Before proceeding to treat of the *materia alimentaria*, Dr. Paris gives a succinct account of the organs and process of digestion. Passing over some ingenious observations on the manner in which the secretions are performed, the following passage appears to us of sufficient importance in relation to the subject of diet, to be quoted before going on to other matter.

‘ 74. Various opinions have existed with regard to the use of the bile : some physiologists have considered it as merely excrementitious, and with this opinion the general mass of mankind would appear to coincide ; for there is scarcely a patient who does not complain of being tormented with bile, while the shop of the druggist groans with the weight of pills which are calculated to expel this fearful enemy from the system. The situation alone of the liver, connected as it is, in every instance, with the upper part of the alimentary canal, would be sufficient to repel such an idea. Others have imagined, that it is a natural and habitual stimulus to the intestines, keeping up their energy and peristaltic motions. It cannot be denied that this is one of its secondary uses : it likewise, from its saponaceous and soluble qualities, diminishes the adhesive nature of the fæces, and, by smoothing their surfaces, promotes their evacuation ; but its first and most important use is to change

the nutritive part of the *chyme* into a new and more highly animalised product, termed *chyle*, and to separate from it the useless and excrementitious part. That such is the truth, is at once proved by the fact, that *chylification* takes place just at the part where the bile flows into the intestine; nothing like chyle is ever found in the stomach; and Dr. Prout, whose able researches in animal chemistry are well known, has ascertained, that albumen, which is the characteristic part of chyle, is never to be discovered in herbivorous animals higher than the pylorus. The question is, moreover, set at rest by the experimental inquiries of Mr. Brodie. He tied a ligature round the common duct of a cat, so as completely to prevent the entrance of the bile into the intestine: he then noted the effects produced in the digestion of the food which the animal had swallowed, either immediately before, or after the operation. The experiment was repeated several times, and the results were uniform. The production of chyme took place as usual, but the conversion of chyme into chyle was invariably and completely interrupted. Not the smallest trace of this latter fluid was discoverable, either in the intestines or in the lacteals. The former contained a semi-fluid substance, resembling the chyme found in the stomach, with this difference, that it became of a thicker consistence, in proportion as it was at a greater distance from the stomach, and that, as it approached the termination of the ilium, the fluid part of it had altogether disappeared, and there remained only a solid substance, differing in appearance from ordinary *fæces*. The lacteals contained a transparent fluid, which probably consisted partly of lymph, partly of the more fluid parts of the chyme which had been absorbed. These experiments, then, clearly demonstrate, that the office of the bile is to change the nutritive part of the chyme into chyle, and to separate from it the excrementitious matter. How, then, it may be asked, does it happen, that persons live for a considerable period, in whom the flow of bile into the duodenum is interrupted? The truth is, that the obstruction of the duct by disease is seldom so complete as to prevent the passage of bile altogether, and the white appearance of the *fæces* may prove the deficiency, or morbid condition, but not the total absence of bile. To ascertain how far this supposition might be supported by experiment, I poured some dilute muriatic acid upon a portion of *fæces* that was perfectly white, when a green colour was immediately produced, which could not have happened without the presence of bile.

‘ 75. In the few authenticated cases of the total obliteration of the duct, the emaciation has been extreme, and the circumstance of the patient having lived a few weeks or months under such circumstances, only proves that nutrition may take place, to some extent, without any chyle being formed. In the above experiments of Mr. Brodie, it appeared that the more fluid parts of the chyme had been absorbed; and probably this would have been sufficient to maintain life for a limited period, especially where but little exhaustion had been occasioned by exercise. We know that nutri-

tive gylsters will afford support, and yet we are quite certain that no chyle can be formed under such circumstances. Sir E. Home has related the case of a child in which no gall ducts existed. The child did not live long, but appears to have died rather of a marasmus than of any intestinal affection; and from this fact he concludes, that one of the offices of the bile is that of converting mucus, or the refuse of the chyle as it passes into the colon, into fat, which is absorbed and diffused over the system. I have already offered an objection to this theory (21).

‘ 76. When perfectly formed chyle, as that obtained from the thoracic duct, is chemically examined, it will present a difference in composition, according to the nature of the aliment from which it was elaborated. If the animal has eaten substances of a fatty nature, the chyle will be found milky white, a little heavier than distilled water, with a strong and peculiar odour, and a saline and sensibly alkaline taste; but if the food should not have contained fat, it will be opaline and almost transparent. Very shortly after chyle is extracted from the living animal, it becomes firm, and almost solid; it then gradually separates into three distinct parts; the one solid, which remains at the bottom of the vessel, the second liquid, and a third that forms a very thin layer at the surface. The chyle at the same time assumes a rose colour. Of the three parts into which chyle thus spontaneously resolves itself, that on the surface, of an opaque white, and which imparts to the fluid the appearance of milk,* is a fatty body; the solid part, or coagulum, seems to be an intermediate substance between albumen and fibrin, for it unites several properties which are common to the two; it wants the fibrous texture as well as the strength and elasticity of the fibrin of the blood; it is also more readily and completely dissolved by caustic potass. The liquid part of chyle resembles the serum of the blood. The proportion, however, of these several parts varies according to the nature of the food. There are species of chyle, such as that from sugar, which contain but very little *albuminous fibrin*; others, such as that from flesh, contain more. The fatty part is very abundant where the food has contained grease or oil, while there is scarcely any under other circumstances.

‘ 77. These observations are of great value to the physiologist, as well as to the pathologist, as they demonstrate the fallacy of that proposition which has been so frequently advanced; viz. “that there are *many* species of food, but only *one* aliment;” intimating thereby, that all substances, by decomposition, contribute to form one identical, invariable, essentially nutritive principle,—the “*quod nutrit*” of ancient authors; whereas, nothing is more clear, than that the nature and composition of the chyle vary with each individual aliment.’—Pp. 59—63.

* ‘The comparison which has been established between chyle and milk has no real foundation; for the former contains nothing which agrees exactly with the constituents of the latter.’

Next in importance are to be ranked the facts which have been ascertained by physiologists relating to the mode in which fluids are disposed of in the stomach. It was long suspected, and has now been ascertained by experiment, that fluids are conveyed from the stomach without passing together with the solid parts of the food by the pylorus. In the opinion of some physiologists, and of Dr. Paris, the vena portæ constitutes one of the avenues through which liquids enter the circulation, and certain medicinal substances find their way into the blood. However this may be, it appears certain, that traces of alcohol, and of other agents capable of acting strongly on the system, may be detected in the blood, and not in the chyle; as well as that the fluid parts of all food, with the exception of milk, which is coagulated, and of oil, are separated from the solid parts in the stomach before digestion begins, and absorbed; or, at least, that whatever food is digested in the stomach, is first converted into a solid form.

Recollecting that the conversion of chyle into blood is performed in the lungs, and that the nature of the chyle is modified by the kind of food taken, it would seem of consequence that in diseases of these organs the food should be carefully chosen out of those materials from which the least irritating kind of chyle might be produced. Nothing very certain seems yet to have been ascertained on this point; but divers have found that oxygen is more quickly consumed when they partake of animal food or spirituous liquors; and the experience of physicians has shewn that this sort of diet exasperates pulmonary disorders, results which, however limited, are of much practical importance. We observe that Dr. Paris lends his authority to the famous doctrine which has in our day led to a peculiar dietetic restriction, we mean the doctrine that hunger and thirst are incompatible with each other: the real question is about the *fact*, which we really dispute: at the same time, we observe that the physiologists who support this doctrine assign the stomach as the seat of hunger, and the fauces that of thirst; and if this be correct, which we are not very willing to admit without reserve, they ought to give some rational explanation of the incompatibility of two sensations not dependent, according to them, on the same organs: we see no more reason to deny the simultaneous existence of hunger and thirst, than of hunger and fatigue, or of hunger and a desire for sleep. It is true, that habit is often the cause of much fluid being desired; but it would also seem that different constitutions require different quantities of fluid during meals, both as a general rule, and in conjunction with particular articles of food. With respect to the benefit of the injunction not to

drink with the food, we believe it to be useful; but are disposed to attribute its principal utility to the smaller quantity of food taken when drinking is abstained from.

If there be nothing fanciful in the following remarks, they are well deserving of a place in the memory: the only doubt is, whether the renovation of energy may not quite as legitimately be considered a signal for the renewal of mental as of bodily labour.

'105. As soon as digestion commences, the blood flows with increased force to the organs destined for its completion; whence, in delicate persons, the operation is frequently attended with a diminution in the power of the senses, and a slight shiver is even experienced; the skin becomes contracted, and the insensible perspiration is diminished. As the process, however, proceeds, a reaction takes place; and, after it is completed, the perspiration becomes free, and often abundant. When the chyle enters the blood, the body becomes enlivened, and the stomach and small intestines having been liberated from their burden, oppose no obstacle to the free indulgence of that desire for activity, which nature has thus instinctively excited for our benefit. Then it is that animals are roused from that repose into which they had subsided during the earlier stages of digestion, and betake themselves to action; then it is that civilised man feels an aptness for exertion, although he mistakes the nature and object of the impulse, and, as Dr. Prout justly observes, is inclined to regard it as nothing more than a healthy sensation by which he is summoned to that occupation to which inclination or duty may prompt him. Thus, instead of being *bodily* active, the studious man receives it as a summons to *mental* exertion; the indolent man, perhaps, merely to *sit up and enjoy himself*; the libertine to commence his libations; and the votary of fashion to attend the crowded circles of gaiety and dissipation: in short, this feeling of renovated energy is used, or abused, in a thousand ways by different individuals, without their ever dreaming that *bodily exercise, and that alone*, is implied by it. The result of which is, that imperfect assimilation, and all its train of consequences, take place.'—P. 83.

Passing more particularly to the subject of the work, Dr. Paris observes, that the *digestive fever*, or the degree of excitement which attends the digestion of a meal, is not commensurate with the labour of digestion, or the complexity of changes to be induced in the aliment; animal food, which is more readily digested than that consisting of vegetables, being also more stimulating. In hot seasons, and in tropical climates, he observes, that herbage, grains, roots, &c., are instinctively preferred. He shews, from the example of our English ancestors, that a diet almost exclusively animal was productive of great disease in this climate; but admits that it may sometimes, like any other stimulant, be medi-

cinally prescribed. Several useful hints may be taken from the following observations :—

‘ On account of the superior nutritive power of animal matter, it is equally evident that the degree of bodily exertion, or exercise, sustained by an individual should not be overlooked in an attempt to adjust the proportion in which animal and vegetable food should be mixed. Persons of sedentary habits are oppressed, and ultimately become diseased, from the excess of nutriment which a full diet of animal food will occasion ; such a condition, by some process not understood, is best corrected by acescent vegetables. It is well known that artisans and labourers, in the confined manufactories of large towns, suffer prodigiously in their health whenever a failure occurs in the crops of common fruits ; this fact was remarkably striking in the years 1804 and 1805. Young children* and growing youths generally thrive upon a generous diet of animal food ; the excess of nutritive matter is consumed in the development of the body, and, if properly digested, imparts strength without repletion. Adults and old persons comparatively require but a small proportion of aliment, unless the nutritive movement be accelerated by violent exercise and hard labour.’—P. 93.

Incidental to the subject of diet, of course, is that of cookery, on which the author makes a few remarks, particularly on points concerning which a good deal of prejudice prevails, though rather, we believe, in the kitchen than among physicians. That roasted meats are more nutritious than boiled, that young meats in particular are more wholesome when so prepared, are undeniable truths ; but nothing is more difficult than to prevent the pernicious interference of friends and nurses in these matters, and their kindness generally countermines the medical attendant. A species of infusion seems to be much better than boiling, and beef-tea and mutton-tea much better than broth. The subject of condiments next comes under consideration ; and, firstly, salt, the beneficial effects of which as a stimulus seem very widely partaken of by the animal kingdom, and are not even confined to it. In addition to the unwholesome consequences mentioned by Dr. Paris, as ensuing from an abstinence from salt, may perhaps be numbered a tendency to the particular habit of body connected with mollities ossium. In reading the histories of cases of this dreadful disorder, we have been struck, in several of the instances, with the circumstance of the individual having habitually avoided taking salt in any form. It is probable, that the apparently whim-

* ‘ The aliment of almost every animal, in its first stage of life, is composed of animal matter ; even graminivorous birds are nourished by the yolk for several days after being hatched.’

sical combinations of certain condiments with meats of a very incongruous character, might all be traced to some instinctive feeling of the utility of such mixtures: thus Dr. Paris traces the addition of apple-sauce to pork to the principle of fatty and gelatinous substances being rendered more digestible by the addition of acids.

On the subject of drinking, we find the author less arbitrary in the enforcement of abstinence from fluid during meals than many of those who believe in the doctrine already alluded to, of hunger and thirst being incompatible sensations: he very properly observes, that the quantity then taken should be small, and is of opinion that the liquid necessary for the repair of our fluids should be taken in the intervals of our solid meals, and that 'both theory and experience appear in this respect to conform, and to demonstrate the advantage which attends a liquid repast about four or five hours after the solid meal.' The common opinion of the hurtfulness of drinking any fluid immediately before eating does not appear to be warranted by any proofs of the proper fluids of the stomach being readily mixed with, or diluted. The following observations, although they seem nothing more than the dictates of common sense, are continually, it would appear, forgotten:—

'147. WATER is unquestionably the natural beverage of man; but any objection against the use of other beverages, founded on their artificial origin, I should at once repel by the same argument (4) which has been adduced in defence of cookery. We are to consider man as he is, not as he might have been, had he never forsaken the rude path of nature. I am willing to confess, that "the more simply life is supported, and the less stimulus we use, the better: and that he is happy who considers water the best drink, and salt the best sauce:" but how rarely does a physician find a patient who has regulated his life by such a maxim! He is generally called upon to reform stomachs already vitiated by bad habits, and which cannot, without much discipline, be reconciled to simple and healthy aliment. Under such circumstances, nothing can be more injudicious than abruptly to withdraw the accustomed stimuli, unless it can be shewn that they are absolutely injurious; a question which it will be my duty to investigate hereafter.'—P. 119.

As very serious consequences are well known to have occurred from the conveyance of water in leaden pipes, those of timber, or, what is still better, of cast iron, should be preferred. What is termed the hardness of water, and which generally depends upon the presence of *sulphate of lime*, may be remedied by the addition of an alkaline carbonate, 'in the proportion of from ten to fifteen grains to every pint,' twenty-

four hours before it is used ; ' or if it should depend upon *super-carbonate of lime*, long ebullition, without any addition, will be found sufficient for its cure.' On toast and water, barley-water, and gruel, although what Dr. Paris says is very reasonable, we shall make no remarks, not thinking quite so highly of these potations, but particularly of the last-named, as Dr. Kitchiner. With respect to tea, we agree with the author, that it proves rather useful to the stomach than the contrary, when taken some hours after the principal meal: we speak of black-tea, for we have seen such undoubted bad effects from partaking incautiously of green-tea, that, except in the state of a very weak infusion, we should incline to condemn its use altogether. Coffee, taken after dinner, seems to enable the French to bear with impunity a sort of dinner that few English stomachs can successfully contend with, and the hint should not be lost sight of in a medicinal point of view. Chocolate, from the oil it contains, as well as the quantity of nutritive matter, is highly objectionable as a common article of diet. Cocoa may more readily be allowed. The practice of drinking soda-water during dinner, is noticed as a source of dyspepsia, the effect of it being to inflate and distend the stomach at a time when the contraction of its muscular coat is essential to chymification.

In the section on fermented liquors, we observe the same sensible discrimination which pervades the rest of the work, the use of these things being, as it ought always to be, distinguished from their abuse. It must be impossible to lay down rules with respect to the particular kinds of wines which will prove most agreeable to particular stomachs, or least detrimental to every constitution. We generally find, that there is a period in the life of hard-drinkers in which they confine themselves to white wine; and Dr. Paris thinks, that ' as a general rule, it may be stated that *white* deserve a preference over *red* wines, because the latter being pressed, and subjected to a stronger fermentation to extract the colouring principle from the husk, are necessarily more loaded with extractive and astringent matter; and as this remains in the stomach after the liquid portion of the wine is absorbed, it will be liable to occasion disturbance.' Our own experience leads us to agree with Dr. Paris, that more has been said of the acidity of wines, and its effects, than is really true. We know people of gouty habit, who are never so well as when they partake daily, and rather freely than otherwise, of claret, yet in whom very slight irregularities in regimen, or any mental disturbance, seldom fail to bring on a paroxysm. Perhaps no better rule with regard to wines

can be kept in view, than what is expressed by Dr. Gregory, when speaking of the diet of the sick : ‘ si parçè libendum est, meraciora Hispaniæ et Lusitaniæ vina optima sunt et maximè salutaria: sin largius, puriora et saniora Galliæ vina tutiora sunt et ægris et sanis.’—(*Conspectus*, c. xxv.)—It is commonly known, that old wine sits better on the stomach than new, and it is as well to know the reason.

‘ It will be necessary to consider the changes produced in this liquor by being kept. In the first place, red wine gradually deposits a quantity of cream of tartar, in combination with extractive and colouring matter, forming what is commonly called the crust; so that a considerable portion of that matter which is likely to disagree with the stomach is thus removed; but when kept in the cask, in addition to this change, a quantity of water is evaporated, and the wine becomes comparatively stronger. The custom of exposing Madeira to motion, and a certain elevation of temperature, by sending it a voyage to the East Indies, unquestionably improves the flavour, and produces some internal change in the composition of the wine, which the chemist is unable to explain.’—P. 143.

The fashionable discountenance of beer has not, in Dr. Paris’s opinion, been productive of beneficial results. Good beer—inasmuch as it is nutritive, does not contain much spirit, and contains a bitter and narcotic principle—would seem to be a very good liquor in small quantities; but we do not consider its property of making people fat much to its advantage. We do not profess to be adepts in the mysteries of training; but we think the author is mistaken, when he says that pugilists who wish to screw themselves up to their fullest strength, are in the habit of taking it at every meal: to be fat is not to be in good condition, and for this reason, if not for others, malt liquor would not seem eligible. We have no classical work of reference on this subject at hand; but to the authority of Mr. Jackson, who is quoted by Dr. Paris, and who is a very respectable man, we are justified in opposing that of no less a person than Mr. Spring, who, not very long ago, said, in our hearing, that if he ever fought a pitched battle again, he would train neither on beer nor on wine, but *on water*. In matters of this kind, we would not adduce higher testimony. Far are we from denying, that beer is a most valuable beverage to the English peasant; but the diseases which it generates in those who live much better than peasants, are too commonly observed to require comment. These remarks of course do not apply to small beer, which, when fresh and mild, is a highly refreshing and salutary liquor. For many very interesting facts connected with the subject of wine, beer, and the different forms of alcohol, we can but refer the reader to the

work itself, as well as to the valuable section on the relative qualities of different articles of diet as regards nutrition and digestion.

Patients commonly, we think, object to the use of milk, alleging that it is too heavy for them; but boiling will be found to destroy this objection, and it then becomes a valuable article of diet, very easily assimilated, and nutritious. In certain states of organic disease, Dr. Paris has found it very advantageous to impregnate it with the fatty matter of mutton suet, inserting the suet in a muslin bag, and simmering it with the milk; and in cases of *tabes mesenterica*, he has found a mixture of lime water and milk beneficial. Fish is moderately nutritious, and not very stimulant: it is not a proper diet where the strength is to be restored, although it is suitable to a debilitated stomach. 'The jockeys who *waste themselves* at Newmarket, in order to reduce their weight, are never allowed meat when fish can be obtained.' Of the more nutritive species of fish, turbot, cod, whiting, haddock, and sole, are the least heating; salmon is perhaps the most nutritive, but not the most digestible; salmon-trout is less objectionable, because less rich and oily; eels are less allowable than salmon, and should never be eaten without vinegar, which condiment is also the fittest to be taken with salmon. In appreciating the value of different kinds of fish, it is to be recollected that 'firmness of texture, whiteness of muscle, and the absence of viliness or viscidities, are the circumstances which render them acceptable to weak stomachs.' Oysters enjoy a reputation which Dr. Paris thinks is undeserved; and lobsters, though nutritive, are indigestible.

'In eating some species of fish, as the pike, it is essential that the small bones should be carefully extracted; the swallowing of them is likely to irritate the alimentary membrane, and instances are recorded in which fistula has been thus produced.'—P. 163.

Under the head of bread, nuts, esculent roots, esculent herbs, and fruits, the practitioner and the general reader will find much very useful information. The superiority of biscuits over bread, in many states of the stomach, is well known; and there is reason to suspect that the pale faces of some children, and even the presence of worms in the intestinal canal, are to be attributed to their eating an undue quantity of bread. Those who cannot refrain from rich soups and ragouts will be glad to learn that the evils of them may be in a great degree corrected by partaking freely of bread at the same time. For suet pudding and for pancakes,

we believe little can be said ; but surely Dr. Paris is a little carried away by the common cry of the world, when he says that ' all pastry is an abomination ;' and that he verily believes, ' that one-half at least of the cases of indigestion which occur after dinner-parties may be traced to this cause ;' for when we survey the truly awful complication of ingredients which constitute a dinner, the pastry forms but a very insignificant article, and is by no means favoured, we should say, with general or with very particular notice. It seems scarcely possible for writers on diet to observe strict impartiality : fancies, and aversions, and the recollections of dyspeptic nights and mornings, continually lead the mind away from the truth. Viewing the subject with perfect coolness, we should really pronounce that pastry, though by no means to be preferred as a frequent form of diet, is, when very moderately partaken of, quite free from offence. Something similar we should say on the subject of nuts ; but it is in vain to tell any man who has once suffered from eating them, that in a *general* way they may be taken, and even pretty freely, without disturbance. We are perhaps disposed to regard too lightly the importance of strict diet to persons in health ; for we confess that, as to variety, we can scarcely see any good reason for creating artificial rules very opposite to those rules of nature which are dictated by her continually varying offerings ; and, notwithstanding all the assertions of science on the subject of the incompatibility of the different processes or stages of digestion, we cannot help ascribing the dyspepsia which afflicts so large a part of mankind rather to the quantity than the quality of what they eat and what they drink. We have never met with a satisfactory example of health being either produced or maintained, by what is called living by rule ; and we hold, that a man in perfect health should be able ' to vary and interchange contraries,' to drink wine to-day, to drink water to-morrow, to ride, or to walk, or to sit still, or to dine with a large party, or by himself, and yet to sleep pretty well, and to rise disposed to all proper exercises of mind and body. As soon as a man begins to suppose he cannot do these things, he begins to think more about himself than is either becoming or useful ; he becomes selfish, and addicted to various contemptible indulgencies, and his mind and his body grow weak together. If, in reality, these things cannot be borne, either because the individual is no longer young, or because his frame is constitutionally defective, his case is deserving of pity, and the treatment of it requires separate consideration.

With all our fear of falling into dietetic fancies, there

undoubtedly are some modern habits which might, in our opinion, be amended. To begin with the morning: the whole labour and exertion of the day, the wear and tear of all the most active hours, is incurred on too slight a foundation: we are convinced, that from hence arises that irritable state of the stomach which is very fertile in the production of nervous feelings, and which causes many individuals to remark, that they are never quite comfortable until after luncheon, or after dinner. Pursue the man through the day, and you will find him at the end of a long morning, wearied in body, jaded in mind, exhausted, feverish, irritable, and over-wrought, sitting down, after the refreshment of a change of dress, to a table crowded with variety; he eats of many things, perhaps more than enough of all, and endeavours to bribe his stomach to consent by wines of many varieties. He at last feels himself satiated, but not enlivened,—full, but uncomfortable,—and remains, perhaps, in this dull state of existence until he retires to bed. It would be sufficiently easy to lay down better rules than these; but so vain to expect mankind to follow them, that, leaving our own dreams of perfection, we return to what Dr. Paris says, ‘on the periods best adapted for meals, and on the intervals which should elapse between each.’

There seems to be a strong disposition in the physical, as well as in the moral constitution of man, to institute *habits*, and this makes it worth great exertions to establish good ones. It is generally agreed among physicians, that digestion is best performed at stated and habitual periods; and on this is founded the propriety of regularity in the hours of taking food. It is also important that the times of eating should be regulated, so as to permit the stomach, and perhaps the whole system of the digestive organs, to have disposed of one meal before being intruded upon by another.

‘Some nations have been satisfied with one meal a day; but the stomach would thus be oppressed with too large a quantity, and, in the interval, would suffer from the want of some nourishment in it. Such a plan, therefore, is neither calculated for persons of robust health, and who are engaged in much bodily exertion, and consequently require large supplies, nor for those of a weak habit, who are not able either to *take* or to *digest* such a quantity of aliment in a single meal as will be sufficient to supply the waste of the body during twenty-four hours. Celsus recommends the healthy to take food rather twice in the day than once; and Sanctorius says, that “the body becomes more heavy and uneasy after six pounds taken at one meal, than after eight taken at three; and that he who makes but one meal in the day, let him eat much or little, is pursuing a system that must ultimately injure him.” In my opinion, an invalid may safely take three frugal meals; or, on some

occasions, even four, provided a certain quantity of exercise be insisted upon.'—P. 190.

Dr. Paris has occasionally recommended the substitution of barley-water, or thin gruel, for tea, at breakfast, with advantage, with dry toast, and a little lean mutton, in some cases ; and he says, that where there is to be a long interval between breakfast and dinner, hard eggs may be taken with propriety, since, though they are very slowly digested, they are not generally offensive to the stomach.

We assent to the author's opinion, that the dinner hour should be two or three o'clock : at Manchester, people dine at one : but in the present state of things this doctrine would be considered perfectly shocking. Call the meal luncheon, however, and much of the prejudice against it will be dispelled, with this further advantage, perhaps, that the meal will be then restricted within proper bounds, for assuredly a very hearty dinner at two would not be particularly favourable to activity. Dr. Paris thinks such an early hour would be favourable to temperance. It ought to be so ; but we must remember, that when the dinner hour was early, nothing was so common as to drink freely, and fight in the park ; whereas, under the system of late hours, sobriety has been cultivated to the exclusion of all the old English conviviality ; and the hearty and fearless enjoyment of our ancestors has been succeeded by a deep attachment to the more deeply-tainting evil of gaming, the nature of which, systematically and *sobberly* pursued, is to make temperance itself a vice. If the general hour of dinner were early, a light supper would be always advisable, not only on account of such a refreshment being required, but because we cannot doubt the benign influence of such a friendly meal, either in families, or in well-chosen society, when the cares and the troubles of the ambitious day give place to those kindly feelings and that agreeable exercise of mind produced by conversation, which form so natural a prelude to such healthy repose as may send us forth once more, when morning summons us to exertion, with an active body and an unclouded mind.

As regards the quantity of food to be taken at each meal, Dr. Paris very judiciously avoids saying more than that it should be limited by the first feeling of satiety, which, provided we eat slowly, will not be found deceptive. Vain attempts have been made by different sects of philosophers and enthusiasts to restrain the quantity of food within very narrow limits ; and some have endeavoured to make this practicable by avoiding exertion. But nature has not allowed these liberties : a certain portion, both of food and exercise,

seems indispensable to the preservation of health ; and whoever voluntarily or wilfully despises this rule, is sure to be convinced at last by suffering. Occasional abstinence has probably most beneficial effects both on the body and mind ; and this, we suppose, is what Milton means when he speaks of " spare Fast, that oft with gods doth diet ;" but there are very few persons in the world who know much of this by experience. The following observations connected with this subject are worth attending to :—

' 238. Those who are induced from their situation in life constantly to exceed the proper standard of diet, will preserve their health by occasionally abstaining from food, or rather, by reducing the usual quantity, and living low, or *maigre*, as the French call it. A poached egg, or a basin of broth, may on such occasions be substituted for the grosser solids. The advantage of such a practice has not only been sanctioned by experience, but demonstrated by experiment. The history of the art of "*training*" will furnish us with some curious facts upon this subject. It is well known that race-horses and fighting-cocks, as well as men, cannot be preserved at their *athletic weight*, or at the " top of their condition," for any length of time ; and that every attempt to force its continuance is followed by disease. A person, therefore, in robust health, should diminish the proportion of his food, in order that he may not attempt to force it beyond the athletic standard. I am particularly anxious to impress this important precept upon the mind of the junior practitioner, as I have, in the course of my professional experience, seen much mischief arise from a neglect of it. A person after an attack of acute disease, when his appetite returns, is in the condition of a pugilist who is about to enter upon a system of *training* ; with this difference, that he is more obnoxious to those evils which are likely to accrue from over-feeding. In a state of debility and emaciation, without any disease, with a voracious appetite, he is prompted to eat largely and frequently ; and he is exhorted by those not initiated in the mysteries of the medical art, to neglect no opportunity to "*get up his strength*." The plan succeeds for a certain time, his strength increases daily, and all goes on well ; but, suddenly, his appetite fails, he becomes again unwell, and fever or some other mischief assails him. To the medical practitioner the cause of the relapse is obvious : he has attempted to force his strength too suddenly and violently beyond that athletic standard which corresponds with the vital condition of his constitution.'—P. 198.

Whatever difference of opinion may exist respecting a carefully-regulated diet in a state of health, there can be no doubt of its necessity in disease. In the different forms of indigestion, from some of which few are happy enough altogether to escape, it becomes a valuable auxiliary to medicine : in the earlier and slighter attacks, slight changes of diet, with

very little and very simple medicine, would probably often dissipate the indisposition; and in the more aggravated states of disorder, medicine, without a proper diet, will generally be unequal to the cure. To this very important subject, the third part of Dr. Paris's book is devoted. Disregarding Dr. Philip's distinction between dyspepsia and indigestion, he defines the latter to be *a primary disease, in which one or more of the several processes by which food is converted into blood, are imperfectly or improperly performed, in consequence either of functional aberration, or organic lesion.* It is a rule with us never to dispute about nosological definitions; but otherwise we might be disposed to remark, that there can be no necessity for indigestion being always a primary disease, nor much propriety in calling it so when it is a consequence of organic lesion, since that lesion must have been preceded by disease. Few men attain the age of forty without finding themselves habitually subject to interruptions of digestion, of which the effect is to destroy the tranquillity and unconsciousness with which in a state of health all the functions are performed, and to disquiet the body and the mind. Arising from various causes, either in the frame and temperament of the individual, or in his habits of mind or body, this disturbance is so general that every man has his own especial complaint to make; and we can feel no surprise that pathologists should have often looked upon the digestive organs as the only root of all the evils by which human health is infested. It intrudes upon the wealthiest, and it torments the poorest; it afflicts the sedentary philosopher, and assails the fox-hunter in the full career of his activity: no sex, no profession, no mode of life, and scarcely any age, is protected from it. There is consequently no subject which excites such universal interest; and whoever addresses mankind on the subject of indigestion, is sure of an audience, every member of which is ready to join in the confession, that 'there is no health in us.'

Dr. Paris's definition of indigestion is sufficient to shew that that disorder is not confined to the stomach; the duodenum is very frequently the seat of it, in which case the distress is not felt so soon after a meal, the oppression is referred to the right side, and along the course of the intestine, which the practitioner should consequently be well acquainted with; and a faint and fluttering pulse is sometimes noticed, supposed to be occasioned 'by the pressure of the *vena cava* against the spine by the distended intestine.' The recommendation of emetics in such a case, in preference to medicines which would propel the offending matter, with

a view to producing *regurgitation* into the stomach' (p. 226), we should consider rather questionable, and not at all strengthened by the fact mentioned at page 229, that though the *stomach* headach is relieved by an emetic, the *duodenal* headach 'receives no mitigation from such a remedy.'

From what we have ourselves repeatedly seen and heard in the course of practice, we think ourselves fully justified in recommending for very careful perusal the following passage: there may not be much that is new in it, but we are satisfied there is much in it that is true, and too often forgotten. It occurs in the part of the work in which the investigation of chronic cases of indigestion is treated of.

' 292. The *intensity* of the symptoms cannot be always inferred from the patient's own report, but must be deduced from our experience in such cases. The dyspeptic is too apt to depict his feelings in extravagant language, and to become unnecessarily anxious and apprehensive. An inquiry into the *duration* of his complaints is of much importance; for it has been already stated (283) that the intervals of comfort are abridged as the disease progresses, until at length he becomes harassed by an uninterrupted series of sufferings. It is, however, from the *locality* of the symptoms that we are to form our opinion with respect to their seat and origin; and for ascertaining this fact we must be particular in our inquiry, and minute in our examination. Is the stomach affected? If a sense of weight or burning after the ingestion of food, and acid or putrescent eructations be present, we may conclude such to be the case. If there exist any uneasiness or fulness in the epigastric and right hypochondric regions, produced or increased by pressure, we may infer that there exists some diseased condition of the liver, duodenum, or, perhaps, of the pyloric orifice of the stomach; and that we may be enabled, under such circumstances, to form a diagnosis, the patient must be submitted to a manual examination. For this purpose, every ligature must be removed from the abdomen, and he must be placed on a sofa, reclining on his back, with his legs drawn up, so as to throw the abdominal muscles into a state of relaxation. Where the fulness and tenderness arise from a distended state of duodenum, the sensation given to the hand is very different from that which is produced by organic disease of the liver; the tumour in the former case is more diffused and less defined. Dr. Yeats also justly observes, that, by pressure on the region of the liver, no uneasiness will be complained of; but if the pressure be made with the edge of the open hand under the ribs, with the palm of it flat upon the abdomen, considerable uneasiness will be felt up towards the liver, and down towards the right kidney; a soreness is likewise felt an inch or two to the right, just above the navel. In such cases also, the anatomical accuracy with which the patient will trace the course of the duodenum with his finger, from the stomach to the loins on the right side, and back again across the abdomen to the

umbilicus, will greatly assist the diagnosis. There are, besides, other symptoms to be hereafter enumerated, which will enable us to arrive at a still more positive conclusion. It is of the greatest importance to distinguish between a morbid state of the duodenum and that of the liver: I have frequently, in the course of my own practice, seen patients who have undergone salivation, from a belief in the existence of hepatic disease, but who were merely suffering under duodenal irritation; and my friend Dr. Yeats has stated the same conviction upon the subject. On the other hand, I am equally satisfied that chronic inflammation of the liver has been repeatedly mistaken for a dyspeptic state of the stomach. Dr. Saunders says, that he has seen many cases of this kind, which have been supposed to arise from indigestion. The patient generally complains of pain, which he falsely attributes to the stomach; and its continuance is so short, and the degree of it frequently so inconsiderable, that no alarm respecting the future health of the patient is produced. The relief obtained by eructation and discharge of air, tends to confirm the opinion that the seat of the disease is in the stomach; but this relief may be explained on the principle of removing the distension of the stomach, and so taking off the pressure of this organ from that which is the seat of the complaint.—Pp. 245—247.

We pass over the author's further observations on the causes and appearances of indigestion, to notice that division of his work in which he considers the cure of it, as far as relates to diet, exercise, and medicinal treatment.

Dr. Paris is not an advocate for very abrupt changes of diet, even where disordered digestion has been induced by dietetic imprudencies, except where such changes can have no direct effect on the vital powers: thus he advises that spirituous stimulants should be very cautiously withdrawn, although 'every species of pastry,' and other indigestible matter, is to be withheld at once. Dyspeptic patients, when they have once taken the alarm, are very apt to run into extremes. The luxurious inhabitant of a town flies into the country, rises many hours before his usual hour, and takes exercise to extreme fatigue. We acknowledge to the propriety of Dr. Paris's direction, that, although such patients should rise betimes, they should not take much exercise before breakfast: a very short exposure to the morning air will enable them to enjoy that meal, and exercise of a stronger kind may be more advantageously taken afterwards. The following general rules will, we have no doubt, be committed to memory by many an anxious invalid:—

'317. It is impossible to frame any general rule that shall apply to every case, but I will offer a sketch of the plan I have usually recommended: the practitioner will readily modify its application to meet the circumstances of any particular case. The dyspeptic

patient should rise from his bed as soon as he wakes in the morning; for, as Mr. Abernethy justly states,—“many persons upon first waking feel alert and disposed to rise, when, upon taking a second sleep, they become lethargic, can scarcely be awakened, and feel oppressed and indisposed to exertion for some time after they have risen.” He should then walk, or rather saunter, for some time in the open air, previous to taking his breakfast, the material of which is to be selected according to the principles already discussed (232). He is now in a condition to follow his usual avocations; but it is a circumstance of no slight importance to procure an evacuation at this period, which is easily effected by habit (79): a person who accustoms himself to the act at a certain hour of the day, will generally feel an inclination at the appointed season. The invalid should not allow his occupations, if sedentary, to engage him for more than three hours, after which, exercise on horseback, or by walking, should be uniformly taken. I have already observed, that the state of the weather ought not to be urged as an objection to the prosecution of measures so essential to health. Where the season of the year, and the situation of the patient, will allow the exercise, I strongly urge the advantages to be derived from digging: the stimulus thus given to the abdominal regions is highly salutary in dyspeptic affections. The hour of dinner should not be later than three o'clock (233), and the patient should rest for an hour before he sits down to the meal (243). It should consist but of few articles (227), should be carefully masticated (236), and the invalid should rise from the table at the moment he perceives that the relish given by the appetite ceases. The manner in which he should regulate his potations, at and subsequent to this meal, has been already considered (146). With respect to the allowance of wine, every practitioner must use his discretion, and be guided by the former habits and present condition of his patient (167). It is essential that the invalid should enjoy rest for at least two hours after dinner (106), that is to say, he should not enter upon any occupation or diversion that may occasion the slightest fatigue; to a gentle walk, or saunter in the garden, there can be no rational objection, especially at that season of the year when such a pastime is the most inviting. At six or seven o'clock, he may take some diluting liquid, as tea; after which, exercise will be highly useful, to assist the sanguification of his previous meal: in the summer season there will be no difficulty in accomplishing this object; and if the strength of the patient will allow the exertion, some active game, as bowls, will be attended with advantage. At ten o'clock he may take some toasted bread, or a lightly boiled egg, with a glass of wine and water, should his previous habits render such an indulgence necessary; and at eleven he may retire to rest. The bed-room should be well ventilated, and its temperature should, as nearly as possible, be that of the apartment from which the patient retires. A well-stuffed mattress is to be preferred to a bed of down, and the curtains should not be so drawn as to exclude the free circulation of air. The invalid should be careful in not retiring to rest

with cold feet : nothing contributes more readily to disturbed sleep, and uneasy dreams, than the unequal circulation which takes place on such occasions.'—Pp. 262—264.

These rules must of course be modified to meet the various necessities of human life : the tradesman must be on his legs all day, and devour his meals as he can ; the labourer must work immediately after dinner ; the merchant must attend to his letters and books ; the professional man to his clients or patients ; but if a man can for the most part order his own time as he likes, he may keep such rules as the above in view. But we cannot think it necessary that two hours after dinner, and two hours after breakfast, should be given up to idleness : one hour is perhaps better spent in very easy occupation, such as reading papers or letters, or, what is better, in conversation of an agreeable kind ; but after this, either business, or study, or gentle exercise, should be resorted to, and the last for one hour is the best : we are then enabled to sit down to our books or business without any feeling of oppression. We commonly hear digging, and all kinds of gardening, recommended ; but are never convinced that such occupations are not bad for the head, and the chest, and the abdomen, and the legs, whatever they may be for the arms : they have at least no advantage over riding or walking. Nor do we see any thing to admire in the ancient game of bowls : it was much pursued in the days of early dinners, and was considered excellent ' for the reins ;' but few people at present obtain any other effect from an occasional application to it than a troublesome lumbago. Gymnastic exercises, of all kinds, have long been too much neglected in this country ; and it would be well if one-third of the time now spent by boys on a backless bench at school were passed in such active sports as would tend to equalise the development of their muscles : strength, and health, and beauty of appearance, would all result from such an arrangement ; but these pastimes are only for the young, and riding and walking are all that men should aspire to after thirty ; consequently the invalids in question are not to be advised to violent experiments. A very grave clergyman in our neighbourhood has actually just fractured the olecranon in an unlucky attempt to leap over a style, having been advised to take very active exercise after dinner. There is yet another word of advice we would give to the man of studious habits : let him refrain from evening and night studies. If he has been able to devote a few hours to his books earlier in the day, he has done enough ; if he has not, it is too late to be diligent ; let him rise earlier the next morning. Studies prolonged into

the night leave but little trace on the mind ; but they disquiet it, and prevent sleep, and so destroy health. After tea, in the summer season, exercise out of doors, or amusing reading within ; and, if in winter, pleasant society, are far to be preferred : the influence of music, too, at such a time, is unquestionably tranquillising and salutary ; and, as the hour of rest approaches, the mind will thus gradually resign itself to those sober thoughts on the flight of time, and the end of life, which the close of day so naturally inspires, and by which we may be led to those appropriate offices of meditation, of which to speak would be to go beyond the physician's province ; but than which there can be no more appropriate introduction to that refreshing sleep by which our worn-out nature is best restored, and the health of the body and mental composure preserved.

Among the complaints which harass the dyspeptic invalid, few are more common and troublesome than acidity : although it is sometimes readily relieved by alkaline medicines, it is not unfrequently not benefited by them ; and, according to Dr. Paris's observation, this would seem particularly to be the case, when the affection of the stomach is symptomatic of disease in some distant organ ; and, independent of medicine, relief of acidity is to be sought by the abandonment of all fried articles, butter and greasy viands, pastry and crude vegetables, &c. ; in short, of all indigestible substances, including broths and veal, which latter ' contains a saccharine principle, which is very susceptible of acetification.' Flatulence, which is also a very common distress to those whose digestion is imperfect, is better relieved by ' calming the irritability of the bowels, than by dispelling the flatus by carminatives ;' and Dr. Paris has found the extract of hyoscyamus, combined with two grains of ipecacuan, productive of much benefit. In the concluding part of the work, of which we have given some account to the reader, will be found many remarks of value on the subjects of clothing, bathing, and change of air, as well as concerning the diet proper for patients labouring under tabes mesenterica and pulmonary disease ; and some very interesting cases, the first of which is but too well calculated to encourage that despondency and dissatisfaction with the ' art of healing,' which every successive year's practice seems to increase in the minds of those who are not too sanguine for cool and attentive observation of what the art can *not* do, as well as of what it *can* accomplish. The second case related (p. 300), appears to illustrate the efficacy which the author ascribes to the vinum colchici in affections of the duodenum ; and the rest are good examples

of the correctness of the dietetic principles laid down in the former parts of the work.

The notice we have taken of the different matters considered in Dr. Paris's book, will at least shew that we have given it a patient perusal; and we can very conscientiously recommend it to a place in the library of the practitioner, where it will always be found a sensible and agreeable book of reference on a subject which, in the hands of most authors, has been imperfectly treated of, or encumbered with trifling observations and unreasonable fancies, or left in uncertainty. 'The Treatise on Diet' is evidently the production of a mind stored with a variety of knowledge, and which has been carefully directed, under the guidance of science, to a subject of great practical and general importance, without being impeded or misled by foolish prejudices, or the more foolish desire of being oracular and surprising; and the work is singularly free from the absurdities which have been, and are so commonly written and spoken concerning dietetic regulations, than which it is very natural that no subject should come more 'home to all men's business and bosoms.' To those who are acquainted with Dr. Paris's style, it is unnecessary to say that the book is pleasantly written, and that the fastidious and purely medical reader occasionally finds it enlivened with passages and illustrations which, without being in the least degree indecorous, are such as the conventional gravity of physic is scarcely willing to permit to its professors. To us, who are 'persons of no sort of education,' this seems no great fault, when the matters in question are eating and drinking; but we would not have it supposed that we are ignorant that there are persons who shake their heads at it. It may not be amiss to remark, that the size of the work is not disproportioned to the subject; and that although there is scarcely any useful fact connected with food and digestion which is not alluded to in the course of it, it cannot be said in any part to be clogged with superfluous discussion. On the whole, to use the author's concluding words, we think it will be conceded to him, that he has 'succeeded in demonstrating the great importance of a well-regulated diet, and in establishing the principles upon which the digestibility and indigestibility of various aliments depend.'

II.

OF THE DISEASES OF INFANTS.

[Second Article.]

Instructions to Mothers and Nurses on the Management of Children in Health and in Disease. By JAMES KENNEDY, M.D. London, 1825.

Commentaries on Diseases of the Stomach and Bowels of Children. By ROBLEY DUNGLISSON, M.D. London, 1824.

Practical Observations on the Convulsions of Infants. By JOHN NORTH, Surgeon-Accoucheur. London, 1826.

Commentaries on some of the most Important Diseases of Children. By JOHN CLARKE, Esq., M.D. London, 1815.

An Epitome of the Diseases incident to Children. By WILLIAM HEBERDEN, M.D., F.R.S., etc. London, 1817.

Traité des Maladies des Enfans jusqu'à la Puberté. Par J. CAPURON, Docteur en Médecine, etc. Paris, 1820.

HAVING in the preceding Number considered, as fully as our limits would admit, the diet and regimen of infants, it is now our intention to treat of those diseases to which infants are either more particularly liable, or which are at least so modified as to require somewhat varied treatment from the same complaints in adults. Before entering, however, upon any single class of infantile disorders, it will not be misplaced to premise some general observations respecting the application of remedies in this early period of life; for though the same kind of medical management is required equally in infancy as in maturer age, the remedies calculated to attain it frequently demand modifications, which cannot be simply reduced to diminished quantity. The subjects, therefore, to which we shall first call the attention of our readers, are blood-letting, the external application of irritants and blisters, and the rules which ought to guide us in the exhibition of two of the most useful, as well as the most dangerous remedies that medicine possesses, viz. opium and calomel.

With respect to blood-letting, the same general rule must govern us in infancy as in maturer life,—we must be guided by the effect; and if our object be to overcome an inflammatory attack, we must detract blood either till our object is obtained, or, at least, till the pulse is reduced. Still, however, experience proves to us, that syncope from loss of blood is much less easily borne in childhood than in adult age, and is more dangerous in proportion as the patient is nearer its birth. Even in adults, where there is much general weakness, convulsions frequently ensue, and, though rarely in

such individuals attended with danger, are in early infancy peculiarly to be dreaded. But, independently of the evil that may arise from convulsions, infants do not readily recover from simple fainting. The author of the article 'Enfant,' in the *Dictionnaire de Médecine*, states, that he had seen very young children die from fainting produced by the application of a few leeches, and others very difficultly roused by the employment of the most powerful external stimulants. These, however, may be regarded as somewhat extreme cases, and serve rather to call our attention to the subject, than as a rule of guidance. Dr. Clarke says, that 'very young children bear very well the loss of blood even to fainting, once or twice; but they ill bear a more frequent repetition of bleeding—their powers sink under it, and by no art can be replaced.'

The considerations, therefore, that we should keep in view respecting blood-letting in children have all a reference to their very tender system, the readiness with which they sometimes sink from exhaustion, and the difficulty of restoring them. But while the judicious physician will be especially careful never to lose sight of these circumstances, he will not, on the other hand, suffer himself to become an inert and inefficient practitioner. Some purposes are to be fulfilled by art, and some must be effected by nature. If circumstances, then, demand blood-letting, — if high inflammatory action is present, he will bleed in the first instance, boldly and decidedly; and afterwards his whole attention will be paid to ascertain the strength of the patient. It may be, that the vessels having been unloaded, we may safely leave nature to restore the more complete equilibrium of the circulation, or, at least, we may assure ourselves, that to deplete farther would so debilitate the infant that all the vital powers would sink at once. In the one case, depletion, at the best, will be useless; in the other, injurious. It may, on the other hand, occur, that the patient's strength will bear, and the disease may demand, a repetition of the blood-letting; but the decision between these two cases is not to be made carelessly. It is not enough, that in inflammation of the lungs the dyspnoea shall remain, to justify us in repeating depletion, for the oppression of the breath may have some other cause than simple inflammation. There may be an accumulation of mucus in the bronchi, which an infant cannot remove by expectoration; or there may be a congestion in the weakened vessels of the lungs, not precisely of an inflammatory kind. Either of these states will be best removed by attending to the patient's strength, exciting his excretions, particularly the urine, and avoiding every stimu-

lating remedy. But if the fever continue high, the pulse strong, and the child cries, as if in pain, upon the slightest cough, we have fully sufficient to authorise us to persevere in a depleting system. Mr. North will not admit that the pulse being weak at the wrist ought to prevent our bleeding, but maintains 'that we are to be guided by the action of the carotids, the violent and continued throbbing of which, at the moment the pulse at the wrist is almost imperceptible, will be a sufficient proof of the necessity of still farther depletion.' We do not recollect, excepting where mechanical obstruction existed, to have ever noticed the carotids beating strongly without a corresponding pulsation at the wrist, and if this should happen, we should fear on this indication alone to deplete largely. It would seem to indicate rather a great inequality of circulation than plethora, and the extremities would most probably be cold. Under these circumstances, we ought certainly to have for our first object to warm both the hands and the feet, and if the symptoms still demanded it, when this was effected, we can run no hazard in taking more blood.

With respect to the means of taking blood from infants, we are confined, for at least the first year of life, to leeches only; in a few cases it may be possible to open a vein as early as this, but such instances are certainly rare. Neither can we, by any means, agree in the remark of Mr. North, that well-marked symptoms of determination to the head, in children, are never removed by leeches, however freely applied. We believe ourselves to have seen many instances of the contrary; but then the *leeches have been freely applied*. We have had frequent occasion to lament the inefficient manner of their application, but rarely their inefficiency when sufficiently numerous. This is, however, only one circumstance which requires attention in the employment of leeches. Another, and not less important, is, that the leeches used shall be large and healthy,* for otherwise no blood, or very

* The following observations, quoted by Mr. Kennedy in his Essay on Cupping, from the Gazette of Health, though not perhaps entitled to implicit credence, are worthy of notice, and certainly prove the necessity of attending to the condition of the leeches:—

'A leech weighing three drachms, took three drachms one scruple. The blood which afterwards escaped from the puncture, amounted to three drachms and a half.

'A leech weighing two drachms, took two drachms ten grains.

'A leech weighing one drachm ten grains, took one drachm ten grains.

'A leech weighing half a drachm, took thirty grains.

'The leeches were weighed immediately before they were applied, and again after their removal.'

If these experiments, on repetition, should prove correct, a very easy

little, will be taken away, and of course no benefit whatever be derived. Cupping is regarded by Mr. North as an efficient mode of detracting blood from infants, 'when the operation is adroitly performed,' but this proviso places it on the same footing with leeches. It is perhaps to be regretted that physicians seldom themselves see that their directions, in cases of this kind, are strictly followed; for we are convinced that far fewer complaints of the inefficiency of medical means would be heard, did medical practitioners take care that they were more properly applied. We do not mean that every dose of a medicine should be administered by the physician, nor that he should take upon himself the office of the nurse; but that important operations, and such, occasionally, blood-letting certainly is, should always be performed under his own eye; nor would it be amiss that he should see even the drugs from which his prescriptions are to be compounded, when these are very liable to lose their medicinal qualities from too long or improper preservation. Though no very precise limitation can be laid down which should guide us in drawing blood from young children, some idea may be drawn of the average quantity that may be taken from such subjects. The following observations of Dr. Clarke's are, perhaps, as correct as any that could be given, and may serve as general data upon which we may proceed in practice:—

'From a child of seven or eight months old, two ounces and a half of blood may be taken, and one and a half, or two more, in sixteen hours afterwards. Three ounces may be taken from a child of a year old, and two and a half or three afterwards, if the symptoms do not yield. At this age, two more may be taken in twelve hours after the second bleeding, if it should be necessary, and the patient has not been too much weakened already.'

Bleeding directly from a vein may be performed whenever the child is old enough to admit it; but unless the vein is very visible we would by no means recommend this mode of depletion. Should the vein be missed, the confidence of the friends is shaken; and the means above alluded to are, when well managed, thoroughly efficient.

Infants are very little capable of bearing cutaneous irritants with impunity. Their skin is delicate, and very liable to run into gangrene. This is remarkably the case when blisters are applied; and we have known one instance ourselves, and heard of several more, where death has been the consequence of their employment. Still, however, it is necessary, and

method is presented of estimating the quantity of blood a leech will take, viz. its own weight; and an equal quantity, or nearly so, appears to have escaped in each after the leeches were withdrawn.

that very frequently, to use counter-irritation in the diseases of children; and the principal object to be guarded against is, that it be not carried too far. For this purpose, it is generally advisable to apply rubefacients, that is, to produce slight inflammation of the skin only, without separation of the skin. To this end, mustard cataplasms are safer and more manageable than blisters, but with a little attention these also may be employed. In applying the last to the skin, we have, for some time past, ordered a piece of very fine thin muslin to be placed between the blister and the skin. The blister acts equally well in this case, but heals infinitely easier if it is thought advisable to retain it on till the cuticle has separated. Great care, however, must be taken that the child does not meddle with the plaster, for in one instance where this happened, the cantharides cerate was pressed through the meshes of the muslin, and sphacelation of the cutis ensued. In laying down these cautions respecting the use of cutaneous irritants, we must not be understood as prohibiting them. In fact, the observance of the cautions will render the employment of such means far easier and safer. Practitioners would less frequently meet with opposition from friends in the use of beneficial remedies, if these, at times, were not so carelessly administered as to inspire rather a dread of evil than to communicate the expectation of advantage. The more powerful remedies are, the more exposed likewise are they to abuse, and, consequently, the more care will every thinking man take that such abuse is not committed by himself.

Few remedies are more extensively employed, and none with less care or precaution, than calomel. The ease with which it can be administered to children, from its want of taste, the unequivocal benefit that sometimes follows its exhibition, and the rare occurrence of salivation in very early life, all serve to render it a medicine of common but thoughtless use, both among medical men and nurses. But though it is very certain that the peculiar effects of mercury seldom do take place,—so seldom that even Dr. Clarke had observed salivation but in three instances, under three years of age,—it is to be remembered, that when produced, it is, in children, frequently attended with fatal effects. This hazard, therefore, ought only to be risked when a disease of the most dangerous nature, and curable by no common method, is the subject of treatment. The danger of salivation, however, is not the only evil to be apprehended from the too common employment of calomel; in very many cases a foundation is thus laid for some of the more unmanageable diseases of infancy. The liability to cold, when the system is under the in-

fluence of mercury, seems almost to be forgotten ; yet nothing can be better ascertained, than that this is the consequence of mercurial medicine. Dr. Goss, in a paper in the *Quarterly Journal of Foreign Medicine*, has mentioned the great sensibility induced in some artisans from this source, and every medical man of common observation must have frequent opportunities of confirming the truth of the remark. But the same sensibility arises also from mercury when employed medicinally, and in every period of life, and, of course, must be more dangerous as the animal frame is more tender. Hence, then, in its remote consequence, mercury, thus carelessly exhibited, becomes a cause of inflammation of the lungs, the peritoneum, of enlargement of the mesenteric glands, or of any other disease which is easily excited by cold. But it has likewise direct consequences, also evil in themselves. It excites continual nausea ; debilitates, though, when seldom given, only temporarily, more than any other medicine ; and, while it lessens the appetite, enfeebles also the digestion. Nor will calomel alone ever correct the secretions so far as to render them healthy in appearance and smell. The dejections produced by calomel are always greenish, slimy, and either perfectly inodorous, or emit a peculiarly unpleasant odour ; and it surely needs no reasoning to prove that health cannot be consistent with such secretions from the alimentary canal. We here have spoken of mercury as it is commonly employed as a purgative, no peculiar symptoms denoting the propriety of its use in preference to any other. But even in some diseases, where it has been customary to give it because it is presumed that it acts more quickly and beneficially than any other remedy, more discrimination is required than has generally been bestowed. 'There are,' says Dr. Blackall, 'perhaps no cases more satisfactory nor more creditable to the practitioner than those fevers of children, with an oppression of the head, in which a bold use of calomel brings off black discharges, and the patient from that moment recovers. Without inquiring here whether hydrocephalus is not thus cured, which never existed, I wish to confine myself to that dropsy, when distinguished by the presence of serum in the urine, and to state, that after scarlatina, the tendency to this alarming conversion is increased under the use of mercurial purges ; that during the exhibition of mercury alone every night, which did not purge, the anasarca has disappeared, and the head become affected ; and that there cannot be a more hopeless or more painful task than that of submitting to the miserable routine of salivating such patients.' Enough, we imagine, has been said, to shew that calomel ought not to be

employed as merely a *common* purgative. A valuable medicine it undoubtedly is, but it is only so when some specific effect is required from it, nor under any other circumstances can it be given with impunity. With regard to the doses of calomel that ought to be given, some differences of opinion exist, and there is a tendency in the present day to give much larger quantities at a time than formerly. We have not ourselves had much experience in the last mode of administering this drug; what we have had, has not appeared to us to have been attended with any peculiar advantages; neither, on the other hand, have we witnessed any evil consequences. Different practitioners will be inclined to different opinions in this respect, probably, according to the cases that may present themselves: we will only remind them, that the purgative qualities of calomel are not increased in proportion to the dose.

Opium may be very shortly considered: there is perhaps no subject on which medical men are more thoroughly agreed. The following observations of Mr. Brande, upon this medicine, are founded upon the most accurate experience; and from the neglect of the cautions he inculcates, we have known death to have ensued in more than one instance:—

‘Opium, if ever administered to children, requires to be given with more than ordinary caution; it should never be resorted to in any form, except upon emergencies; and all opiates, especially syrup of poppies, and some nostrums containing opium, which are but too frequently used to quiet children, should be most imperiously excluded from the list of nursery medicines.’*

Having thus passed very briefly in review these remedies, which are more or less employed in very many diseases of children, we shall now proceed to the consideration of the diseases themselves. In doing this, we purpose following the order observed by M. Capuron, not perhaps as unexceptionable, but at least as convenient as any other with which we are acquainted.

M. Capuron commences this section of his work with the disorders of the alimentary canal. He appears, however, to us to have made his subdivisions unnecessarily minute, having placed the retention of meconium, obstipation, colic, flatulence, and the presence of acid in the primæ viæ, under

* The following observation is an excellent illustration of the value of Mr. Brande’s advice:—‘I have myself lately witnessed two cases, in one of which a drachm of the syrup of poppies, and in another a powder containing a quarter of a grain of opium, proved fatal to young infants; and a case is referred to by the late Dr. Clarke, in which forty drops of Dalby’s Carminative was attended with equally disastrous results.’

distinct heads. The disease, however, is colic, of which the others are either causes or symptoms, and of course the treatment is to be directed by these last.

One of the most distinctive signs of colic in infants is, continually straining up the feet, and an endeavour to bend the body upon the thighs, with violent crying, and sometimes even convulsions. The dejections at the same time are of an improper colour, consisting, immediately after birth, of meconium only; when milk has been given, of partially undigested curd, either green when first expelled, or becoming so in a very short time afterwards. There is likewise sometimes a peculiarly disagreeable acid smell. Flatulence generally accompanies this state of the bowels; and, we may say, is rarely present without some other affection of the intestines.

If the pains are the mere consequence of retention of the meconium, it will generally suffice to evacuate the bowels freely, and every unpleasant symptom will quickly disappear. We have already noticed this part of the subject in our former paper; and we need only add here the observation of Dr. Heberden, that 'it is often useful to assist medicines by throwing up six ounces of milk and water, or thin gruel, in the form of a clyster.' Where much anxiety is felt by the parent on account of the child, it will be always wise to recommend this additional means.

The same treatment is proper for simple constipation in infants where it is *not* habitual, as, where it is habitual, frequent injections are more advisable than purgative medicine given by the mouth. If flatulence is much prevalent, when there is no other manifest disease of the bowels, we have often found a mixture of rhubarb and magnesia, with a small quantity of oil of fennel, useful; a single, or at most two drops of the oil, with half a scruple of the other ingredients, in a two ounce mixture. A tea-spoonful twice or three times a day, has, in our experience, much relieved this troublesome symptom. Where acidity is present, regard should be had to the diet, as it invariably proceeds from error in this respect. Magnesia will remove it for a time, but has no permanent good effect.

With respect to the more frequent source of colic in children who are fed entirely on the breast, we are inclined to assent to the observation of Capuron, who says, '*que rien ne dispose plus aux tranchées les enfans qui tettent, que leur voracité, qui ne leur permet presque pas de quitter le mammelon,*'—that nothing more disposes children at the breast to colic, than that eagerness which scarcely permits them to loose the nipple. We may observe, once for all, in

this place, that, in addition to the remedies and treatment mentioned here, the rules which we have laid down in the preceding Number ought always to be followed.

Diarrhœa.—The disease which we purpose noticing particularly under this head, is that to which the name of watery gripes has been assigned, since it is a very frequent and very unmanageable complaint in infants. This disease may attack infants, whether fed entirely from the breast, or brought up artificially; but it is of comparatively rare occurrence in the former case. Its first symptoms are sometimes overlooked: the infant is observed to have more frequent evacuations than usual, and perhaps to be rather languid; but as such patients are frequently subject to colic pains, it is thought little of. Gradually, however, the evacuations become more and more frequent, exceedingly copious, and the griping pains extremely severe. The dejections come away with a loud report of wind, and the contraction of the abdomen and intestines is sometimes so strong as to expel the evacuated matter to several feet. Before each evacuation a rumbling noise is heard in the abdomen, as if the contents of the intestines were advancing towards the rectum; and every time the infant swallows, however little, a dejection immediately ensues. At first, the child cries loudly, kicks strongly, and draws the legs, as it were, convulsively towards the abdomen; but as the disease continues, it becomes weaker, and unable to evince its distress but by slight moans and general restlessness, and at length, quite exhausted, lies without any motion. Sometimes, however, before the complaint arrives at this state, convulsions ensue, and the child dies in one of the paroxysms; or, falling into an apparent slumber immediately after, dies without a struggle. In some cases, no alleviation having taken place in the complaint of the bowels, symptoms of hydrocephalus are added. The child cannot bear the light, screams with that peculiar cry so distinctive of affections of the head, will not bear the head to be in the slightest degree raised, the pupil becomes permanently contracted or dilated, perfect insensibility has place, and death ensues, rather in consequence of the cerebral disturbance than from that of the bowels. Convulsions, though generally slight, frequently occur while the child is perfectly insensible. When the head has become affected, we have never known a single instance of recovery in this disease.

To the symptoms above enumerated, there is frequently, also, much fever; and the face is flushed, the skin hot and dry, the tongue red and furred, and great thirst is present.

Dissection frequently throws no light upon this complaint.

The inner tunic of the intestines is often free from every diseased appearance, even when the symptoms during life have given every reason to believe that inflammation had existed. We are not, however, on this account disposed to deny the previous existence of inflammation, but rather that it had been resolved by the immense discharges of fluid matter from the bowels during life. In the acute diarrhœa, of which the watery gripes of infants may be considered as a species, there is perhaps little question of inflammation being one cause, if at least the signs, as laid down by authors, are of any value; for we have pain, restlessness, thirst, heat of skin, and the red tongue. The stools, also, are stated to be sometimes bloody; but this we have never seen in the simple diarrhœa of infants.*

With regard to the treatment, very much will depend upon the period at which we are called to the patient, and the extent to which the disorder has already proceeded.

If called very early, and before the patient has become exhausted, our first consideration must regard the state of the bowels with respect to their contents. If there is reason to believe, from the nature of the previous evacuations, from the hardness and swelling of the abdomen, and from the habit of the child having been usually costive, that any offending matter is still retained in the intestines,—the first object to be attained is its expulsion; for, till this is effected, every remedy serves but to exasperate (or, at best, to retard the fatal effects), and not to cure the disease. As, at the same time, the bilious secretions are always disordered, as evinced by the evacuations either being green, or presently becoming so, it will be advisable to combine calomel with some other purgative. We have ourselves employed a powder of two grains of calomel, and four or five of rhubarb, to be repeated every four hours until it has operated, which has generally acted well, and, where the disorder has been recent, has prevented its farther progress. When we are satisfied that the bowels are thoroughly evacuated, our next object must be to change the state of the mucous membrane, to abate the acrimony of its secretions, and to allay the violent action of the muscular coat. To this end, if the pain continue severe, and the strength of the child will permit, a few leeches may be placed either upon the rectum or the abdomen, and fomentations constantly applied. As a medicine, the most effectual

* There may be a slight tinge of blood occurring in consequence of the infant straining, and partial prolapsus ani ensuing; but when the discharge of blood is copious, there is reason to fear some additional disorder of the bowels.

has appeared to us, a powder, composed of three grains of hydrargyrus cum creta, with one grain of the pulv. ipecacuanha compositus, three or four times a day. The child, at the same time, is either to be kept entirely to the breast, or fed very scantily upon broth, without the smallest particle of fat, or any more solid substance. In the very early period of the disease, this plan will be frequently efficient; but when it is once thoroughly established, it is far more difficult of management. In addition to the means above recommended, we must often recur to starch clysters, with a small quantity of laudanum in them; a cardiac mixture, also, may be given, with chalk; catechu, and aromatic spirits of ammonia, in small, but frequent doses; and, if the child is not too much exhausted, we may order a warm bath. It has also been recommended to apply a plaster to the abdomen, in which laudanum is combined. In the London Practice of Midwifery, a case is given, where this appears to have been peculiarly beneficial; and in a disease so terrible as this, when it is once thoroughly established, we shall not be justified in neglecting any remedy that promises advantage.* This malady is generally the consequence of errors in diet; and in one instance, in which, from want of milk in the breasts of the mother, the child was dry-nursed, every remedy was useless till a wet-nurse was procured, when the purging almost instantly ceased, and the patient gradually recovered its strength. As whenever disorder of the bowels has had place it is very liable to return, it is very important that attention be paid to the nature and number of the evacuations, and that the slightest deviation from health be immediately corrected by appropriate medicines. In the language of Capuron, 'we ought never to forget that sensibility peculiar to this period of life, requires the greatest prudence to be exercised in its management. 'On ne devrait jamais oublier que la sensibilité naturelle à cet âge exige les plus grands ménagemens.'

Hiccup and vomiting are treated of separately, both by Dr. Heberden and Capuron. They are, however, always the consequence of disordered digestion, and require to be treated accordingly. Occasionally they prove extremely obstinate, and require exclusive remedies. For the former, Dr. Heberden advises a few drops of the spiritus ammoniæ, or of the

* The following are the ingredients of the plaster employed in the case referred to:—Emp. opii, ʒiiss.; emplast. plumbi ʒij.; pulv. opii ʒj.; olei menth. ʒj.; camphor. ʒj.; well mixed together, and spread upon leather. The glisters should be repeated every two or three hours, or even oftener, according as the intestinal canal is more or less irritable.

tinctura camphoræ composita ; or, if the stomach is evidently disordered, a little rhubarb. It will, however, very seldom happen that hiccup shall prove so serious a complaint as to demand the attention of the medical practitioner. With regard to vomiting, it can only be treated upon general principles, and it will commonly yield in infants, when not symptomatic of disease within the head, to aperients and proper diet.

Dentition.—All those diseases to which children are liable at other times may occur during dentition ; and, in this case, they are aggravated by the irritation proceeding from the swelled and inflamed gums. The diseases themselves must, in such circumstances, be treated appropriately ; but, at the same time, the gums should always be lanced. We should think it useless to remark upon this subject, did we not know that there exists a great disinclination among medical practitioners even now to perform this operation, so frequently as it would be beneficial. Nay, we have even heard it maintained, that the gums will become harder, and dentition more difficult, if it should happen that the incision should cicatrise without the protrusion of the teeth. Such reasoning as this, however well it is calculated to impose upon the friends of children, is really disgraceful to the medical man who employs it, because it betokens either gross ignorance, or gross dishonesty. Certainly for the last twenty years, it has been a matter of notoriety in the profession, that new parts are more readily absorbed than the original formations of the body. Hence, in fever, the cicatrix of an old ulcer is sometimes removed, and the wound becomes as large as though cicatrisation had never happened ; and the callus of a broken bone not unfrequently exhibits the same phenomenon. How, therefore, any well-educated practitioner can maintain such reasoning as we have alluded to, we cannot understand. We leave them, however, in the dilemma in which we have placed them ; and, in confirmation of our own opinion respecting the propriety of the operation, we give the following remarks of Dr. Clarke :—

‘ When the gums are much tumefied, they should be freely divided ; the discharge of blood from the operation will generally lessen the local inflammation and the painful distension, and then the increased determination of the circulation towards the head will subside. The objections which formerly were taken to dividing the gums now scarcely deserve notice, because *it is well ascertained that it is always done with impunity, and often with great advantage.** If the division of the gums should be unnecessarily per-

* There is one source, however, of injury in lancing the gums, not connected, necessarily, with the operation, though frequently arising from it.

formed, no inconvenience can result from it; but great mischief may arise from omitting it when required. In performing this operation (trifling as it appears), it has been well observed by Dr. Underwood, that it is not simply to scarify the surface of the gums, but the incision should be carried down to the tooth, so that the membrane which covers the tooth shall also be divided. When the gums lying upon the molares require to be divided, it is not sufficient to make the incision merely in the direction of the jaw, but transverse incisions must be also made to set the tooth quite at liberty, so that in its farther advance it may never irritate the gum again.'

The diarrhoea that accompanies dentition may generally be regarded as beneficial, still it is necessary to watch it closely; and, if the dejections are unhealthy, or so frequent as greatly to debilitate the patient, recourse must be had to appropriate medicinal treatment. To stop a diarrhoea, however, without rectifying the secretions, must always be regarded as dangerous. The plan to be pursued is the same with that recommended in the acute diarrhoea of infants when in its earlier stages. This malady itself, however, may accompany dentition.

Eruptions of various kinds, also, are not infrequent during this period; and, in these, external applications, such at least as may repel them, are very dangerous. Constitutional remedies alone are safe or justifiable. The maxillary glands are very subject to swell during dentition; they demand, however, no peculiar treatment.

The remaining portion of the present article we shall confine to the notice of several ailments to which children are liable, not for the most part very important in themselves, but for which medical practitioners are often consulted.

Disorder of the Urinary Organs.—These organs are subject in infants to two opposite derangements of their functions. An incontinence of urine, and a difficulty in voiding it. The first is very frequent in both sexes; but, according to Capuron, girls are more liable to it than boys. Where it is owing to debility only, it generally ceases as the child grows older. Capuron, however, mentions a young girl, in whom it had continued till she was eighteen years of age, and who was not even aware that it was a defect. It generally is confined to the period of sleep, the individual being able when awake to retain his urine perfectly. The causes of this incontinence

Sometimes the gums suppurate, and ulceration proceeds to a considerable extent. In every instance which we have seen of this, we had every reason to believe that it had originated from employing dirty lancets. Such negligence can scarcely be too much reprobated; yet we know it to be common.

of urine are different. It may originate either from weakness of the sphincter vesicæ, or from too irritable a state of the bladder itself, and, of course, will require different remedies according to its cause. If the irritability of the bladder is the source of the incontinence, there will generally be pain in the pubic region, and the child will be otherwise ill. Where it arises from weakness only, there is no manifest constitutional disorder, and even the weakness may be only local. In the latter case, topical cold bathing, lying upon a mattress, and a general tonic system, will be proper. In the former, all our efforts must be directed to allay the irritability, by diluents, fomentations, leeches, &c.

Difficulty of voiding Urine.—This is no uncommon disorder, but generally yields to purgatives and warm bathing. It may occasionally be necessary to draw off the urine, but this is not of frequent occurrence. If blood passes with the urine, and great pain is experienced, there is reason to suspect a calculus, and examination should be made accordingly. Baglivi has stated fatal convulsions to be an occasional consequence of calculi in the bladders of children.

Hydrocele.—This is by no means unusual in children, but rarely requires an operation. It generally disappears quickly under the employment of evaporating lotions. Sir Astley Cooper has described a plan of operating where this becomes necessary, by merely passing a ligature with a common curved needle transversely through the hydrocele, 'including about an inch and a half of integument, and one inch of the tunica vaginalis. He then ties the thread with a knot, leaving it loosely hanging in the tunica vaginalis and scrotum. No confinement is necessary; the child runs about as usual, until the part reddens, swells, and becomes hard, which is in about a week, and at the end of that time he withdraws the thread, and the adhesive inflammation produces the cure.'

Discharge of Blood from the Pudenda.—This happens often in female infants, but is never a matter of importance. There is also from the same parts, very frequently, a fluor albus, and the parts become inflamed and sore. Careful cleanliness and aperients readily remove it in a short time. In children of three or four years old, however, it is sometimes more obstinate, and lasts for several weeks, but we have never seen any eventual evil result from it.

Eruptions.—The various eruptions to which infants are liable have all their origin in a disordered state of the digestive organs, and are dependent upon the correction of these for their safe removal. Most of them are greatly aggravated

during the period of teething; and both French and German physicians appear to regard them as true revellents. They are doubtless to be treated cautiously, for if suddenly repelled by cold, or any other application, inflammations of the chest or bowels very commonly ensue. There is no reason, however, for neglecting constitutional remedies, and if the eruptions are red and irritable, tepid bathing may be safely and advantageously resorted to. Mild aperients, with occasional tonics, and a rigid attention to regimen and diet, will, in most cases, prove successful.

In the treatment of eruptive diseases there is need, on the part of the medical practitioner, of unceasing vigilance and perseverance. Many of them are of the most obstinate and unyielding nature under the routine that is usually pursued, while, to strict attention and appropriate practice, they will readily yield. There are few physicians who have not known diseases of this kind, after resisting their own management, cured by some quack of celebrity. We are acquainted with more than one instance, both in our own practice, and in those of men of deservedly high reputation, and we have naturally felt anxious to become acquainted with the method so successfully employed. But the time is now passed when the mystery of a quack passes with men of sense for something beyond the common reach of intellect. The mystery is known for trick, and independent entirely of the real plan of cure; and, so far as our observation has gone in the case before us, these obstinate eruptive diseases have been overcome, by persevering and never failing attention, to cleanliness, to diet, and to regimen; and, not satisfied with merely inculcating their advice, the persons alluded to ensure its adoption by their own personal superintendence. ‘*Fas est et ab hoste doceri,*’ the lesson thus taught us, it is our own fault if we turn not to advantage; and we shall ever maintain that it is perfectly possible for medical men to do all that is necessary, without either descending to quackish mysticism, or, in any way whatever, compromising the dignity of their professional character. As medical men, it is our part to bring all the resources of the art to the cure of disease—as religious and moral men, it is our duty to suffer no indulgence of vanity, nor foolish pride, to interfere with their effectual employment; and never shall we better consult our worldly interests than when we thoroughly perform all the duties of our station.

III.

OF THE DISEASES OF THE EYE.

A Treatise on the Diseases of the Eye ; including the Doctrines and Practice of the most eminent Modern Surgeons, and particularly those of Professor Beer. By GEORGE FRICK, M.D., Ophthalmic Surgeon to the Baltimore General Dispensary. *A New Edition ; with Notes.* By RICHARD WELBANK, Member of the Royal College of Surgeons, and of the Medical and Chirurgical Society of London. *With an Engraving.* 8vo. Pp. xii.—308. London, 1826.

A Review of the different Operations performed on the Eyes for the restoration of Lost, and the improvement of Imperfect Vision ; in which the most judicious and successful Methods of Operating on these Organs are described, and the general Causes of failure faithfully delineated. Also, a full Account of the various Structures and Diseases of the Eyes, and their Appendages ; together with the necessary Mode of Treatment : the whole being the result of several Years extensive Practice in this important department of Surgery. By WILLIAM CLEOBUREY, Member of the Royal College of Surgeons, London ; and one of the Surgeons of the Radcliffe Infirmary, Oxford. 8vo. Pp. iv.—288. London, 1826.

THE above works are of two distinct classes of writings,—the one systematic and orderly, the other desultory but practical. The first is drawn up by a gentleman who, after studying in England and in Germany, prepares to deliver lectures on diseases of the eye to his fellow countrymen in America : the second may be considered as the abridged notes and remarks of an experienced practitioner, who has for some years exercised his profession in Oxford, and who wishes to publish the results of his observations in the branch of practice which has most interested him.

The foundation of the American book which Mr. Welbank has re-edited in this country, is the excellent and celebrated compendium of Professor Beer, of Vienna. It appears to have been Dr. Frick's intention at first to translate the work of Beer, but various considerations induced him rather to abandon that design, and, instead of executing it, to prepare and publish the work that is now under our consideration. We are disposed to think that he has done well, and to give him credit for having composed a work which will be a valuable acquisition to his professional countrymen, if he rightly represents the state of things in America, where the work of the late Mr. Saunders is, he says, ' the only one to which the student can have reference.'

The English, who possess the systematic works of Travers, Weller, and Guthrie, with an almost endless supply of information in detached writings on the different parts of this extensive and interesting subject, have less occasion per-

haps for a compendium like that of Dr. Frick, in which the various diseases are considered so little at length, that even a student will find it desirable to refer to other writers for additional information.

There is, however, something of neat completeness in the book that pleases us much, and the modest manner in which its author estimates its merits, does not at all lessen our opinion of the good sense and judgment evinced in its composition. The notes of Mr. Welbank add something to the value of the work : they discover a fair share of reading, and a good practical acquaintance with diseases of the eye.

In a compact systematic work we do not of course look for much that is original, indeed we are quite satisfied, if without any thing original, provided the author embodies as much as possible of the scattered information which other writers furnish, and which it is the business of the system-composer to collect and arrange. Dr. Frick appears to us to have adopted an arrangement calculated to give a complete view of the successive changes which the eye and its appendages undergo. The divisions of his subject are founded upon the variety of textures which enter into the composition of the eye. He first treats of the various forms of inflammation of the eye ; then of the effects or consequences of this inflammation ; afterwards of diseases of the appendages ; and, lastly, of such diseases as attack at the same time several, or all the textures of the organ.

It is not our design to accompany Dr. Frick through all these divisions of the subject, and as we think the first is as generally interesting as any, and as well treated, it is to that we shall confine our remarks. Mr. Cleobury may be perhaps occasionally called in to assist us in our comment. His book, with its numerous headings in perfect disorder, should have been entitled " Desultory Remarks," or if that would not be dignified enough, " Practical Commentaries on Sundry Diseases of the Eye, and on some of the Operations required for their relief." With him, there is no kind of arrangement, nor any attempt at completely treating any one branch of his subject. He commences with the operations for cataract, proceeds to those for artificial pupil, then considers some species of ophthalmia, treats of the sclerotic coat and its diseases, of the choroid, of the iris, of some of the diseases of the latter, of the membrana pupillaris, of the optic nerve, of the retina and its affections, &c. &c. &c. ; returns to the operations for cataract, re-introduces artificial pupil, has a few remarks to make on the defective sight of literary characters, on suppurations of the globe, on artificial eyes, on diseases of the appendages of the eye, and concludes with observations

on the treatment of the eyes in small pox, and measles. There is, fortunately, a very full table and contents, and the headings are in characters sufficiently legible. It will readily be supposed that any one seeking to learn the writer's opinion on any point will be particularly glad of the assistance which these will afford him. We regret that there is not more of management of the materials of this work, as the author, in the main, takes a sensible view both of the operations and of the general practice in diseases of the eye. He might have omitted too, some common-place remarks which are here and there introduced with the parade and sound of special announcement, and which, consequently, must much disappoint his readers, even though they should not be professional. But we will return to the task which we have imposed on ourselves of examining the account given by Dr. Frick of the inflammations to which the eye is subject.

Pure inflammation of the Eye is distinguished from all other species of ophthalmia by its being seated in no particular tissue, but affecting, equally, all the tissues. There are present all the ordinary characters of inflammation in other parts of the body, redness, heat, pain, and swelling, joined with those which arise from the connection and office of the organ; a sense of dryness, increased pain from the admission of light, from motion of the eye, and from pressure.

The pain is not confined to any particular part, but affects with equal violence the whole orbit. It is acute, lancinating, and incessant, extending also to the head. When suppuration commences it becomes throbbing, and the eye feels as if it would burst. The redness is equally diffused. The swelling of the conjunctiva, from distension of vessels and effusion, makes it project above the cornea, and sometimes even between the eyelids, preventing their closure. The lids also swell. As the disease advances, a muco-purulent discharge is furnished by the conjunctiva, and the lachrymal glands pour forth scalding tears. Blood is sometimes effused into the chambers of the eye. There is high sympathetic fever. If the disease still proceeds, the cornea becomes dim, ulcerates, and sloughs, the contents of the eye partially escape. If deep-seated suppuration has taken place, the internal structure is wholly destroyed, vision is lost, and as the parts are discharged with the matter of the abscess, the globe collapses.

The causes of this kind of inflammation of the eye, are the common causes of inflammation of any other part of the body, and some that are peculiar to the organ. External injury, as a very forcible blow or a wound, the lodgment of a foreign body within the structure of the globe, or between the folds

of the conjunctiva, sudden changes of temperature, exposure to the strong heat and intense light of furnaces, a vitiated atmosphere, and acrid vapours, too long continued employment of the eyes on bright or minute objects, &c.

The treatment, including the careful removal of the cause, when that continues in operation, should be most actively antiphlogistic. Dr. Frick says, that 'where there is fever, connected with a full and hard pulse, one or two general bleedings should be advised, and these may be succeeded by cupping or leeches.' He recommends the leeches being applied at the inner canthus, over the facial vein, where they will most speedily obtain a considerable quantity of blood. In our opinion, Dr. F. speaks much too slightly of general bleeding. The necessity for its employment is not to be measured by the degree of fever, but by the sense of pain, by the general distress of the organ, by the extended feeling of uneasiness in the socket and of the head, and by the sensations produced on pressing lightly the ball of the eye. These signs precede the fever, though but a little while; but time is important. We know very well that when a deep injury has been inflicted by a coarse body, no extent of bleeding will prevent the destruction of the organ. • But, even in this case, the sufferings of the patient will be mitigated at each succeeding general bleeding; and in cases where the cause is not so inevitably destructive, nothing, we believe, gives so fair a chance of saving a severely inflamed eye as the most decisive use of the lancet. Bleed, *ad deliquium*, in the first instance; bleed repeatedly, and leech too, in a short time; foment the eye that is inflamed, and purge your patient freely with calomel, and jalap, and senna, and salts, and you give him, we believe, the best chance of preserving his sight. As auxiliaries in the treatment, antimonials, in repeated doses, and blisters to the nape of the neck, are very useful, especially when an impression has been made by the bleedings and leechings. Collyria are improper during the first stage of this inflammation, but come in very properly after a few days, when the symptoms are no longer excessive, and the redness, with some preternatural sensibility of the eye, continue. They have an admirable effect in removing the slighter symptoms of simple inflammation when it has become chronic. In this state of things, the ointments usually employed are also beneficial. This inflammation having gone the length of destroying vision, the globe of the eye being converted into an abscess of the worst kind,—one with the matter painfully confined by a fibrous membrane—What is to be done? This point is not considered by

Dr. Frick; but a judicious line of practice is recommended by Mr. Cleobury, and we quote him on the point.

‘ When the globe has suppurated, and the choroid and iris are involved in the inflammation, so that it is utterly impracticable to preserve the patient’s sight, it is needless to prolong his sufferings. The tightness, toughness, and elasticity of the external tunic of the eye, prevents the matter from readily approaching the surface, so as to burst and gain egress. The pain that the patient endures during the confinement of this matter is so great, that it exceeds description; night after night passes without a moment’s rest; he is almost distracted with the pain in his head and temples, which, in some instances, is so severe as to produce delirium. But all these urgent symptoms may be immediately relieved, by evacuating the whole contents of the globe, which will be best effected by introducing a cornea knife through the sclerotica, as far back as possible, at least considerably behind the cornea, and bringing its point out on the opposite side, so that a large and free opening may be made, at which the whole contents of the globe, with a very little assistance, will readily escape. If the operator, from fear, or a futile attempt to save the eye, merely punctures the cornea, the object of his operation will not be effected, and his patient will be disappointed, for he will reap no relief. Another mode of effecting this object is, by plunging a sharp-pointed bistoury through the sclerotica, and bringing its point out on the opposite side, and then dividing the interspace. The globe should then be fomented with warm water several times, as it will seldom bear a poultice: it should be dressed as simply as possible, kept clean, and the bowels regulated.

‘ I have frequently known instances of individuals, who have not enjoyed any rest for weeks, go home and sleep soundly the first night after the operation, so instant is the relief afforded.

‘ The eye will not invariably sink after this operation, as the aqueous humour will still be secreted, and the vitreous will, to a certain extent, be regenerated. A year or two afterwards an artificial eye may be adopted.’

Catarrhal Inflammation of the Eyes.—This is an inflammation of the conjunctiva from a common, as distinguished from a specific cause.

There is itching or burning, and stiffness of the eyelids, the redness is unequally diffused, the vessels running in bundles across the eye, and spaces less red intervening. The distended vessels move with the lids, and not with the ball of the eye. There is a sensation as of dust within the lids, and objects are seen as through a mist. The symptoms get worse towards evening, whilst the contrary is usually the case in strumous ophthalmia. There is commonly inflammation of some other portion of mucous membrane besides

the conjunctiva. It is attended by febrile symptoms: the conjunctiva very soon furnishes some discharge. Small vesicles or pustules appear near the edge of the eyelids; and these, on bursting, leave slight specks of ulceration.

This form of disease is readily distinguished from the more formidable inflammation just treated of. The character of the redness and of the pain, which in this case does not affect the whole orbit, should be attended to; pressure on the eye scarcely occasions uneasiness. If there be headach, it is of a different character, and not so constant.

The treatment is much more mild. A moderate bleeding is sometimes required, more frequently cupping or leeching will answer as well. Slightly astringent collyria should be used early, and frequently. Common purgatives and antimonials are very proper.

When the puriform secretion is established, a solution of lapis divinus is recommended by Frick. We suspect this secretion would seldom be established if astringents were employed earlier.

In the chronic form, scarification and ointments are directed. Tonics, too, are to be employed.

Mr. Welbank, in a sensible note, speaks of the utility of mild astringents early employed, of aperients, and of saline diaphoretics, with an anodyne at bedtime. We think that astringents are not employed early enough, nor directed to be used so frequently as they should be. Every two or three hours a mild astringent solution may be advantageously dropped within the eyelids, in cases of catarrhal inflammation.

Strumous Ophthalmia.—A species of inflammation of the eyes, which attacks children and young persons of a scrofulous constitution. It is a disease of the conjunctiva, attended by the following symptoms:—swollen, red, and half-closed eyelids; intolerance, and careful avoidance of light; a profusion of acrid tears which irritate the cheek, and occasion itching and frequent rubbing. There is considerable difficulty in opening the eyelids, which are often spasmodically closed when it is attempted to separate them. The conjunctiva is unequally red, the vessels running in bundles towards the cornea, at the edge of which small pustules, or, if these have been broken, ulcers appear. Most of the vessels seem to terminate near the circumference of the cornea, some shoot on towards its centre, and others do not pass beyond the sclerotica.

When the vessels of the conjunctiva in numbers overshoot the margin of the cornea, and advance in radii to its centre,

the transparency of the eye is obscured, and the iris and pupil are concealed by a reddish brown fleshy appearance, which is assumed by the conjunctiva which covers the cornea. In some instances, the vessels of the cornea are engaged. Though there is so much intolerance of light, that membrane appears of a colour which has been compared to that of broken flint; scarcely any pain is felt in this species of ophthalmia, except when attempts are made to separate the eyelids, and then the pain seems chiefly to affect the lids themselves, and to arise in part from the spasm of the orbicularis muscle. Dr. Frick recommends very mild measures in the treatment of this form of ophthalmia. Bleeding and purges are said to be seldom required. The restoration of impaired secretion is the object to be aimed at. Antimony, and liq. ammon. acet., and sometimes pulv. ipecac. comp.; calomel and opium to act at once on the bowels and skin, when that is desirable; or, when the cornea is opaque, mercury, carried to the extent of slightly affecting the mouth, are severally recommended. Local applications are thought of little service. In the spasm of the orbicularis, fumigations of laudanum in boiling water are mentioned as useful; or, instead of these, poultices of bread and laudanum, fomentations of poppy heads, or of hemlock, may be tried.

Great attention is requisite to air, exercise, and diet. Light should be excluded. Blisters behind the ears, and to the nape of the neck, are eminently useful, especially in removing the sensibility to light. Issues are an excellent means of preventing a relapse. In obstinate cases, tonics are recommended, and infusion of roses is thought one of the best. We suspect that the excellent mild aperient formed by Epsom salts, in combination with dilute sulphuric acid, which often so materially promotes a good habit of body, has obtained for the infusion the credit which, alone, it would hardly have acquired. Some other alteratives are spoken of, and mild astringent collyria and ointments are advised. In our opinion, there is no better application, when slight stimulation is admissible, than an ointment of red precipitate, of gradually increased strength; and it is of use to continue its employment for a long time. It seems to make the eye more hardy, as well as the lids more healthy.

Purulent Ophthalmia.—Dr. Frick gives a very neat account of this disease, as it occurs in infants. We perceive nothing peculiar either in his description, or in the treatment he recommends. Mr. Welbank is an advocate for the early use of astringents. We are of opinion that if they were always

applied, from the very first appearance of the disease, and used with the frequency recommended by us under the head of catarrhal ophthalmy, the destruction of some eyes would be prevented.

Dr. Frick observes, that many surgeons have denied the existence of a form of purulent ophthalmy produced by the application of gonorrhœal matter; but that, though he has not himself seen it, on the authority of men of the highest professional character, who have witnessed and described it in all its frightful and destructive characters, we cannot reasonably entertain a doubt that it does occur. It is curious that in the course of twenty-five years, the late Mr. Pearson had never seen a single case; whether he ever did meet with one, in his extensive experience, we have yet to learn. We leave the forms of purulent ophthalmy, to proceed to the rheumatic species.

Rheumatic Ophthalmy has its seat in the sclerotic coat, a texture analagous to that which rheumatism commonly affects. It is apt to alternate with, or be attendant upon, rheumatism in other parts. It is influenced by the same atmospherical changes, and often relieved by similar means, as rheumatism. It commences with a deep lancinating pain of the orbit, or an acute pain of the eyebrow, to which part the pain is sometimes confined; but commonly it extends over the whole side of the head. The pain is worse when the patient is warm in bed, and sometimes it returns every night, with much regularity, after a remission during the day. There is redness of the sclerotica, intolerance of light, and a discharge of tears. The redness, at first, is of a rose colour, and is produced by the fine vessels of the sclerotic. It is then equally diffused, but the conjunctiva soon participates in the inflammation, and its vessels are seen more superficial, and of a florid red colour. The cornea too, and the iris, become implicated as the disease advances; haziness of the former, and even ulceration, appearing; and the zone of vessels which mark the presence of iritis, together with change of colour of the iris, and a deposit of lymph on its surface, intimate the progress of mischief. All the internal parts of the eye may ultimately undergo changes from a slow inflammatory process, which will then materially impair, if not entirely destroy vision. The common causes of inflammation, but especially exposure to sudden atmospheric changes, and such other causes as produce rheumatism, will occasion this disease. It is attended, and often ushered in, by feverish symptoms, and is very apt to affect again any person who has already suffered from it. The employment

of mercury will, we believe, induce a susceptibility to this kind of attack, which is not very easily counteracted.

Treatment.—When the disease is violent, and the pulse hard, general and local bleeding may be employed in its first stage; but blood-letting should be employed as carefully in this as in any other rheumatic affection. The period of the disease is always an important consideration. It is very desirable to use this measure as early as possible. The application of leeches to a joint recently affected with rheumatism has a most happy effect. It is not nearly so beneficial after a few days have elapsed; and when it produces relief, metastasis is much more apt to ensue.

Dr. Frick advises the employment of an emetic, or an active cathartic, after bleeding. We presume he would not omit the cathartic, if he used the emetic. Nauseating doses of antimony are to be given.

Mr. Wardrop has used, with advantage, small doses of bark; but Dr. Frick thinks the practice scarcely admissible in his country, where inflammations are of a more violent character than in England. Blisters behind the ears or neck, and fomentations, afford some relief to the pain. Mr. Wardrop's practice of letting out the aqueous humour is said to give relief. We question if it be of any advantage to drop *vin. opii* within the lids, as has been advised. Mr. Brodie recommends *colchicum* in those cases of ophthalmia which succeed to puriform inflammation of the urethra with rheumatism of the joints. Mr. Welbank notices the injurious influence of light acid wines, cider, &c., and points out the importance of attention to acidity in the stomach in gouty subjects.

We have said that the use of mercury induces a susceptibility to this kind of inflammation; but yet we have prescribed, with the most beneficial effects in cases of this kind, a grain of *Opium*, and five of calomel, at night, followed by a brisk cathartic in the morning. Two or three repetitions of this dose, at intervals of two nights, have brought the disease into a mild state, fitted for the employment of bark, which has completed the cure. We have also employed *colchicum*, in combination with carbonate of potash, and this has relieved the pain. Periodical pain in the ball of the eye, unattended by redness, or other signs of inflammation, and occurring chiefly in nervous women, should be distinguished from even the mildest forms of the disease in question. The periodical pain of the eye yields to sulphate of quinine as to the influence of magic.

We find we must pass over inflammations of the iris,

whether they be idiopathic, or syphilitic, or gouty; and here we must conclude. Dr. Frick's work is very well suited to the limited library of medical students; for it is concise, and yet embraces the whole subject of diseases of the eye. We should, however, advise our friends of this class, very soon to refer to writings which treat more at large of each head of that subject. Several of the best of these are quoted and referred to by Mr. Welbank.

It is difficult to say who should be the readers of Mr. Cleobury's book. Men who have often ten minutes to spare, and seldom more than half an hour (many such there are in the profession), may gain a few hints by dipping into this collection of scraps: they will find some of them to be sensible, and that in them the tone of good practice prevails.

IV.

OF THE EXTIRPATION OF DISEASED OVARIA.

Observations on Extraction of Diseased Ovaria; illustrated by Plates, coloured after Nature. By JOHN LIZARS, Surgeon, &c. Folio. Edinburgh, 1825.

WE have expressed ourselves, in the earlier Numbers of this Journal, against any attempts at manual operations on the diseased ovarium, excepting under certain circumstances, and for reasons that will appear in the sequel. The first stage of that disease, which has usually been denominated dropsy of the ovarium, is undoubtedly, in the majority of cases, inflammatory in its character; and, indeed, this character remains, to a considerable extent, until the effusion of fluid in the structure of the organ becomes very copious, and even in some instances it accompanies the effusion throughout. But still it is an inflammatory action, attended with diminished tonicity of the capillaries of the diseased structure, and with depressed energy of the system generally. Under this condition of disease, the usual means adopted against inflammations fail of producing the effects expected from them; unless employed in the very first stage of disorder; they are still more inefficient when resorted to in the more advanced stages; and the different kinds of diuretics and purgatives are equally unsuccessful at all times. Yet we have seen several cases of ovarian dropsy, in the early stages, completely arrested, and subsequently disappear gradually. We have seen also a few cases wherein the disease had advanced to the last stage, as respects the extent of the effusion, or internal deposition of fluid, and yet the patient has continued

to enjoy a comparatively good state of health for a great many years, and even to arrive at very advanced age. We at present know a lady approaching seventy, who has carried about with her for upwards of twenty years, a very large dropsical tumour of the ovarium; and yet she is able to take her usual exercise daily. Now, what has been beneficial in those cases ought to be resorted to in others, and certainly should never be overlooked and the preference given to surgical operations, which must be, as respects this disease particularly, extremely precarious, without the concurrence of both the physician and surgeon. When the physician finds his skill and endeavours baffled, it is then time that the dexterity of the surgeon should be called to his aid, but not till then; and the surgeon should never hazard the result of an operation until judicious medical measures have been duly employed. It has been urged by surgeons, that dropsy of the ovarium is a disease which is incurable by medical means. This is not, however, the case. It is sometimes curable in its earlier stages, when properly treated; and every person possessing even common opportunities of observation, may see that it is endurable in many instances even when far advanced. Having stated this much, chiefly with a view of contending that surgeons ought not of themselves to be the judges, in cases of this description, when medical means should be employed, or relinquished in favour of the knife, and not with the intention of pointing out the treatment which is proper in the different stages and circumstances of the disease, we now proceed to notice the splendid and very able work of Mr. Lizars, whose science and enterprise justly entitle him to be placed in the foremost rank of modern surgeons.

Mr. Lizars commences with a copious and interesting history of instances on medical record of important operations on the ovarium, and of cases of extirpation of this organ performed previous to those by himself.

We quote the following successful case which he performed:—

‘Janet I——, aged thirty-six, an unmarried woman, of middle stature, well shaped, of a sallow complexion, and possessing considerable muscular strength, is affected with an enlargement of the abdomen, so as to resemble a woman in the eighth month of pregnancy. On examination of the abdomen, it appears to be distended with fluid, and a large hard tumour, which feels as if it were the uterus having a fetus of the seventh month, or an extra-uterine conception; for, in one place, the tumour is round, like the head of a fetus, while in another place you imagine you can distinguish an elbow or knee-joint. This mass can be rolled from one side of the

abdomen to the other, floating in the fluid. On examination per vaginam, the os uteri can be felt indistinctly, and nearer the meatus urinarius than in the natural state; and beyond this, a tumour is felt like the head of a foetus in the pelvis, and incapable of being moved. Per rectum, this round tumour is still more distinctly felt. She complains of pain in the lumbar and sacral regions, and considerable oppression of breathing. On consulting with Dr. Campbell, lecturer on midwifery, and Mr. Kennedy, surgeon of this city, who called me in to see this patient, we were of opinion, from the tumour in the pelvis being so immovable, that no operation was advisable, excepting the performing paracentesis abdominis for the removal of the ascites. When our opinion was communicated to the patient, she seemed much dejected, having learned that I had operated previously with success for the same disease. The history of Janet I——'s case is as follows:—

'About six years ago, after exposure to cold during the night, she was seized with excruciating pain in the back, accompanied with violent vomiting, both of which continued more or less severe for nearly six days, the pain being sometimes so severe, as to compel her to roll on the ground, writhing in agony. At this time, she first perceived, in the right iliac region, a tumour about the size of her fist, quite immovable, but which, as it progressively enlarged, has become more and more moveable. Since the commencement, she has been generally, for a day or two every month, tormented with pain in the lumbar and sacral regions; and she imagines, that she has been troubled with the dropsy, more or less, from the beginning. The catamenia have occurred regularly, have been scanty and light coloured, and have never increased the pain. Her bowels have been throughout very constipated. She has undergone two courses of mercury, and repeated courses of diuretic medicines; but all to no purpose. Of all the diuretics, the supertartrate of potass has had greatest effect in removing the ascites; but the tumour then only appeared more evident. During this period of six years she has been cook to a large family, until last November.

'This woman, miserable herself, and a burden to her poor relations, implored Mr. Kennedy to urge me to remove one of the tumours, in order to try the effect of it. I therefore visited her again, and from her entreaties resolved to operate, and if the tumour in the pelvis should prove to be the uterus in a diseased condition, even to remove it.

'The day before the operation, she had a smart dose of the compound powder of jalap, which operated briskly. This day, Sunday, the 27th of February 1825, at one o'clock P. M. I began the operation, the patient being placed on her back, on a table covered with blankets, and the temperature of the room heated to 75° of Fahrenheit. The external incision having extended through the skin, and adipose substance, from the ensiform cartilage to the symphysis pubis, a little on the left of the linea alba, I cautiously cut through the muscles and the peritoneum, near the umbilicus, making a small

aperture into the latter, when the serous fluid flowed freely out, which was also collected by means of saucers and sponges: as the fluid ceased to flow, the wound was enlarged downwards. The whole measured about a gallon and a half. The wound was then enlarged upwards to the sternum, making that in the peritoneum correspond with the wound in the integuments, when the tumour appeared occupying the greater portion of the abdomen, and resembled the uterus in the eighth or ninth month of gestation, as represented in Plate I. I now laid hold of the tumour, brought it beyond the parietes of the abdomen, and gave it into the hands of my assistant, Mr. Macrae, as its weight threatened to drag the uterus; I then passed my fingers around the pedicle, which appeared the broad ligament of the uterus, soft, flaccid, and healthy, and about an inch and a half in length, the fundus uteri being elevated about an inch above, or atlantad to, the crista pubis. A ligature, composed of two strong threads waxed, was next passed round this pedicle, and tied intermediate between the fundus uteri and the tumour, transfixing the pedicle between the noose of the ligature and the tumour, to prevent the noose slipping off. Lastly, I cut across the pedicle close to the tumour. During the progress of the operation, she complained of pain in the lumbar and sacral regions, which appeared to arise from the dragging of the tumour—a circumstance scarcely possible to be avoided, with all our care. My next object was to ascertain the condition of the uterus, as I was prepared to remove it had it been diseased; the uterus, however, was perfectly soft, and only a little enlarged. The other ovary was increased to nearly the size of the fourth part of the one removed, and was adhering on the right side to the parietes of the pelvis, and to the uterus, but comparatively free on the left side. While examining this, the gentlemen around me begged me to desist, in which I concurred, conceiving, that as the uterus was elevated above the brim of the pelvis, and the ovary not tied down by adhesions to the bottom of the pelvis, there might be hopes of its rising after the other had been detached, and that it might be extirpated afterwards. I now proceeded to bring the edges of the wound in apposition, by the employment of ligatures and adhesive straps; of the former there were seven, and of the latter nine, the wound itself being twelve inches. I regret that I employed so few ligatures, for in wounds of the abdomen they are particularly useful, to prevent any protrusion of the viscera, and to give support in all the motions of the abdomen during the cure. When the ligatures and adhesive straps had been applied, and the ligature encircling the pedicle carefully left out, compresses of lint and linen were put on, and the abdomen encircled with a shawl, as a binder employed after accouchement. This I found in the former case much more serviceable than a nine or twenty-tailed bandage, or stays, or any other fashionable dress. The thermometer in the room had by this time risen to 80°. I now laid my patient carefully in bed on her back, and considering that I had, to my own, as well as the satisfaction of all present, taken precautions against every risk of

hæmorrhage, I left her to the care of her sister-in-law, with strict injunctions to keep her quiet, and to let her have only plain or toast-water. Apprehensive, therefore, only of inflammation, I requested an intelligent pupil, Mr. Milroy, surgeon, to call every two hours, and on the least appearance of a rise in the pulse, or increase of pain, to abstract blood to fainting.

The operation was finished about one o'clock; my pupil, Mr. Milroy, called between two and three o'clock, and found her sleeping, and doing well; I called myself within a few minutes to four o'clock, and met one of her relations on his way for me, as she was dying from loss of blood. I found the binder, dressings, and a considerable space of the sheets, drenched with blood, my patient scarcely able to articulate, her voice hardly audible, her face cold, and covered with clammy sweat, and the hands and feet equally cold, with no pulse at the wrists, and the arteries even of the temples scarcely perceptible. I instantly removed the dressings, cut the four lower or pubic stitches, separated the lips of the wound, removed several coagula of blood, traced the ligature to its source, found it firm and fast, and saw no oozing vessel, after repeated sponging; I therefore desisted, renewed the stitches and adhesive straps, and bound all up again. I appointed assistants to sit by her, with injunctions to examine the wound frequently, and to watch the pulse; the hands and feet were clothed with worsted stockings, and hot dressing-irons applied, being previously surrounded with flannel. She remained low and exhausted, vomiting from time to time during the remainder of the evening, but began to gain strength about midnight, and turned on her right side, when she was relieved from the vomiting, and enjoyed some sleep.

On Monday morning, she was very restless, complaining of pain in the lumbar and sacral regions, and feeling very thirsty; her pulse was so small and quick as hardly to be counted; her skin soft, and becoming warmer; her tongue a little furred and parched; there was no appearance of hæmorrhage, but the binder and dressings were tinged with serous exudation coloured with blood, apparently the dropsical fluid. The urine was drawn off by the catheter. Low diet and rest enjoined. At mid-day the symptoms were improving, the pulse becoming fuller; but she felt considerable pain from flatus in the bowels, which was not increased on full inspiration, or felt on pressure. Ordered essence of peppermint. About five in the afternoon, the pulse could be counted at the wrist, and beat 120 pulsations. In the evening she became very fatigued and thirsty, and complained more of the pain from flatus, the pain darting throughout the abdomen; but she had no pain on pressure, or taking a full inspiration. The skin was warmer, but the left arm and leg felt still cool; the pulse 127, and small; the tongue furred and parched. Urine drawn off, and the same injunctions repeated, with the administration of the peppermint. At midnight these flatulent pains were excruciating, and were relieved by the insertion of a glyster-pipe into the rectum,

remains, in consequence, I imagine, of having transfixed the pedicle: it excites a little purulent discharge.'

The following case was less successful; the patient, however, recovered from the operation, although not from the disease.

'Magdalene B—, an unmarried woman, aged thirty-four, about six years ago, while serving as cook to a family, observed a tumour, about the size of a hen's egg, in the hypogastric and right iliac regions, which occasioned no pain, until about six months afterwards, when she received a severe fall while carrying a large basket. The pain at this period was so severe, and the tumour increased so rapidly, that she went into the infirmary of this place, where, after remaining for some time, she was dismissed as incurable. After this, she was recommended by a practitioner in town to apply leeches and chamomile poultices, and to undergo a course of mercury, all of which were put in practice, and so far relieved her, that she was able in three months to return to service, where she remained about half a year; when, becoming alarmed from the rapidity of the increase of the tumour, which was now accompanied with occasional suppression of urine, and irregularity of the catamenia, she was compelled to leave her service. She applied to several medical gentlemen, who prescribed various remedies, until calling on that scientific physician Dr. Poole, who thought there was some prospect of affording her relief by operation. The first time I saw her, the abdomen was fully larger than that of a woman in the ninth month of gestation, and felt hard and firm, so that I considered the tumour, from its immobility, to be strongly adhering to the parietes of the abdomen; and hence that it was an unfavourable case for operation. Her health, however, was good; she had considerable muscular strength, had a healthy countenance, a good pulse, regular bowels, but the catamenia stopt; and having entreated earnestly that something might be done, as she felt herself becoming daily less able to assist herself or her family, the 24th of April was fixed for the day of operation. On the day preceding she took a cathartic.

'The day was remarkably cold for the season; for although a large fire had been put on by seven in the morning, the thermometer had arisen only to 66° by one o'clock. When the heat of the room had risen to 70° of Fahrenheit, which was between one and two o'clock, a longitudinal incision was made through the integuments, from the sternum to the pubes: at the sternal extremity the peritoneum was wounded, and one finger of the left hand was here introduced, then another, and the peritoneum laid open to the pubes: the same was then done upwards to the sternum, when a multiplicity of convoluted vessels presented themselves, of various magnitude, from the thickness of a finger to that of a crow's quill. At first I thought them the intestines, for they appeared extremely fleshy; then I imagined them the blood vessels

of a placenta, which they still more resembled : indeed, such was their resemblance to the vessels of that organ, that the same idea struck one and all of the gentlemen present. On minute examination, however, they were found to be the blood vessels of the omentum majus, enormously enlarged, running on the surface, and into the substance of the tumour, which appeared an enlarged ovarium. Finding that it was impracticable either to dissect these vessels from the surface of the tumour, or to secure them, in consequence of their great number, I abandoned the idea of extirpating the mass, in which decision I was supported by the gentlemen present ; I therefore punctured with a large trocar and canula the centre of the tumour, but nothing flowed ; I next made a small but deep incision with a scalpel, when the tumour appeared solid and cartilaginous, and a vessel bled a little : I lastly punctured the lower part of the tumour, being anxious to reduce its bulk, but only pure blood flowed. The lips of the wound were now approximated and stitched ; adhesive straps applied, compresses of lint and linen, with a shawl as a binder, and the patient carried to bed. This operation was performed in the presence of James Dease, esq., surgeon to the forces ; Drs. Poole, Campbell, and Millar ; Messrs James Scott, George White, and many other surgeons and students. Allowed only toast-water for either drink or food.

At 3 o'clock, an hour and a half after the operation, the pulse was 64, and soft, and she had been much troubled with flatus. Twenty ounces of blood were taken from the arm, from prudential motives. At half-past 5 P.M. she complained of pain at the epigastric region, and was very restless ; the pulse 72, and somewhat hard. At half-past 7, she had made water naturally, and of a healthy colour ; the pain was the same, and the pulse 86, full, and hard, so that the bleeding was repeated to thirty-five ounces ; after which she was ordered three grains of opium. Toast-water continued. At half-past 8 P.M., she complained of a burning pain at the epigastric region, and was occasionally troubled with flatus, which caused considerable pain in the wound ; but otherwise disposed to sleep, and the pulse 80, soft, and languid. Half-past 9, pulse 89, and somewhat stronger ; the pain at epigastrium much abated, but an oppressive load felt in that region. At 10 o'clock, pulse 97, and strong. A quarter past 10, had been asleep for about ten minutes ; the pulse 94, and not quite so strong ; she felt a burning pain and heat all over the abdomen : 11 o'clock, had slept for twenty minutes, pulse 88, and softer : 12 o'clock, she was restless, and had considerable thirst ; pulse 98, and soft ; took two grains more of opium, after which she slept for about fifteen minutes, and when she awoke, the pulse was 100 ; fell asleep again, and continued so for twenty minutes. At 2 A.M., she still felt pain on any eructation, but none on taking a full inspiration, or on pressing either side of the abdomen ; the thirst urgent, the skin and tongue soft and natural, and the pulse 100 ; took two grains more of opium : 3 A.M., she had slept for fifteen minutes at a time during the last hour, and was less troubled with pain and

eructations; her thirst still considerable, and the pulse 100: 4 A.M., continued sleeping from time to time; felt some headach, and less pain in the abdomen; but troubled with both flatus and coughing; pulse 100: 5 A.M., precisely as at last report, only less headach: 6 A.M., awakened after enjoying an hour's sleep, and felt much refreshed: 7 A.M., had slept at intervals during the last hour; pulse 96, and full.

' Monday, 9 A.M.—Had slept occasionally since 7; felt oppression at epigastric region, and some tension of the abdomen; was still troubled with eructations, and vomited a little; pulse 96, full, and strong; respiration a little laborious; skin a little warm, and tongue parched; urine drawn off to 16 ounces, and rather dark coloured; bled to 36 ounces, after which she felt much relieved; the pulse became soft and feeble, but rose to 118; and, by 11 o'clock, after enjoying a little refreshing sleep, she was entirely relieved of pain or oppression, and the pulse was 84, and soft, and the skin and tongue natural. At 4 P.M., had slept soundly at intervals since 11 o'clock, during which she had been troubled with eructations; began now to be a little restless and thirsty; pulse 107, and soft: 8 o'clock P.M., she had slept more or less since 6 o'clock, and complained of pain in the hypogastric region; the pulse 108, soft, and full, the skin moist, and the tongue natural; 20 ounces more of blood were taken from the arm, which removed the pain. The blood formerly abstracted exhibited no marks of increased action or absorption, viz. buffy coat or cupping; after this last bleeding she took two grains of opium.

' Tuesday, 26th, 9 A.M.—After the bleeding last evening she fell sound asleep, and continued so for an hour, when some noise was accidentally made in the adjoining room, which awoke her, and she continued restless and somewhat frightened during the rest of the night. She observed, that the opium went to her head. Her skin and tongue were natural, and the pulse 108, soft, and feeble. Felt pain when teased with flatus or coughing; but none on drawing a deep inspiration. Urine drawn off to the extent of 8 ounces, of a natural colour. Cont. ut heri. At 8 P.M., had slept at intervals during the day, and continued as in the morning; pulse 115, soft, and not so feeble. Urine drawn off, of a natural colour, to the extent of 10 ounces. Sumat gum. opii, gr. iij.

' Wednesday, 27th.—Had passed a good night, and said she felt much better; pulse 112, and soft; skin and tongue natural. Had made water naturally during the night. Cont. ut antea. Repet. opium ad gr. ij.

' Thursday, 28th.—The opium taken at bed-time not having produced sleep by 11 o'clock, P.M., she took other two grains; but still no sleep was produced: on the contrary, she continued restless, and vomited twice. No pain in the abdomen; pulse 100, and soft; skin and tongue natural. Ordered first a domestic enema, which operated well, and then coffee and toast-bread. At

8 P.M. did not reject the coffee, and slept at intervals soundly during the day.

'Friday, 29th.—Passed another indifferent night, but felt much better, being only troubled a little with cough. Had a domestic enema in the morning, which operated well; pulse 96, and soft; other appearances natural. Wound examined, and found adhering throughout; there was so little moisture, that the straps were allowed to remain. Appl. ung. simpl. To have panada, coffee, tea, gruel, and bread, for diet. Capiat gum. opii gr. ij. horā somni.

'Saturday, 30th.—Slept very indifferently, which she attributes to the disturbance occasioned by the nurse who attended her labouring under a cough. Felt herself, however, easy, but still teased with her own cough. Pulse 100, and soft. Had a domestic enema in the morning, which operated well. Wound examined, and found so dry, that the lint only was changed. Cont. ut heri, sine opio. Ordered half an ounce of castor oil at bedtime.

'Sunday, May 1st.—Rested well last night, and the castor oil operated thrice in the morning; she felt free of pain in the abdomen, but was more troubled with the cough; the adhesive straps were removed, and others substituted; one of the stitches near the pubes had broken, and another was removed for future operations with the cautery, as might be determined on. The wound adhered throughout. Cont. ut heri, omitt. ol. ricini.

'Thursday, May 5th.—Has been daily improving since last report. On Monday, she had her bed made, and was allowed weak beef-tea for dinner, which on Tuesday was made of an ordinary strength. Yesterday, she was allowed vegetable broth. This day, after passing a tolerable night, she felt herself remarkably well, having no pain, and little or no cough; but had some difficulty in voiding her urine. Yesterday, she took occasionally a drachm of nitrous ether, and applied warm moist cloths to the pudenda. To-day, the urine was drawn off; the pulse 84, and soft; the skin warm and moist, and the tongue clean and natural. She has a domestic enema administered every morning, which operates gently. The wound healing well, and the discharge so trifling, that the adhesive straps require to be changed only every second day.

'Saturday, May 7th.—The cough and irritation of the bladder have subsided; she sleeps soundly, is free of pain, eats heartily, sits up for an hour in the day in bed, and has motion in her bowels without the enema: she is allowed ordinary fare. The wound healing rapidly.'

The work of Mr. Lizars, we may say in conclusion, is well deserving of the attention of the profession.

V.

DR. STRUVE'S ARTIFICIAL MINERAL WATERS.

Observations on the Artificial Mineral Waters of Dr. Struve, of Dresden, prepared at Brighton; with Cases. By W. KING, M.D., Fellow of the Royal College of Physicians, London; late Fellow of St. Peter's College, Cambridge. Brighton; 1826.

DR. KREYSIG, of Dresden, has already given his testimony in favour of the natural waters of Carlsbad, and of the artificial ones prepared by Dr. Struve, in a small work which has been translated into our own language; and now Dr. King, a respectable physician, comes forward with the result of his observations respecting Dr. Struve's artificial mineral waters, as prepared at Brighton. Although we view with suspicion all publications emanating from watering places, particularly when they set forth the virtues of that by means of which they are aiming at celebrity, yet the known respectability of Dr. Kreysig, of Dr. Struve, and of Dr. King, as well as the composition of the waters which they recommend, induce us to direct attention to the subject. Before, however, we notice Dr. King, as he appears now before us, we may remark, that the speculators in Dr. Struve's artificial waters have, perhaps, done well in selecting a place situated like Brighton, for trying their effects. For those who put confidence in them to the extent of proceeding to Brighton in order to use them, have,—in addition to the effects arising from this very faith which has thus inspired them, and in addition too to whatever advantage the waters themselves are calculated to bestow,—the benefit of a sea air, a pure atmosphere, moderate exercise, and variety of amusements,—enjoyments of no small moment in the removal of chronic disease, and of many of the sequelæ of acute ailments. The distance, too, from town is moderate, yet the change is great; the facilities of removal considerable, and, altogether, the thing is wisely contrived on the part of those more particularly concerned in the success of the speculation. But as the waters are really calculated to benefit both those who vend them and who write in commendation of them, and as their composition would lead us, *à priori*, to expect benefit from a judiciously conducted course of them, so would we recommend either the original speculators, or some others equally qualified, to extend the benefits of them to those who have it not in their power to leave the metropolis.

Before we proceed to state some part of the evidence

adduced by Dr. King in favour of the mineral waters which may now be procured at Brighton, we are compelled to say, that this evidence is better calculated for the non-medical than for the medical reader. The latter will complain that his proofs are neither full nor satisfactory; and will at once see that they are deficient in that precision and copiousness of detail which can alone render them acceptable to him. And we are much deceived if he will not be more induced to make trial of the waters by the information which Dr. King has given respecting their composition, than by the practical evidence which his pamphlet contains of their virtues. But we must proceed to give our readers an idea of our author's production.

'The diseases,' Dr. K. informs us, 'in which the Carlsbad waters are most serviceable, are of a chronic kind; and the various forms of such diseases, in their simple state, as well as when connected with local affections, open a wide field of difficult inquiry. In England, by far the majority of our cases are acute; and when the immediate symptoms are subdued, should chronic consequences ensue, we are too often obliged to look on in a state of inactivity, rather superintending, in order to prevent fresh attacks and derangement, than actively employed in restoring perfect health. We even see, occasionally, the slow but certain footsteps approaching of serious mischief, without the power of avoiding it. We search in vain for some remedy which may affect the constitution itself, and the actions of all its parts, which may give a new turn to all the vital processes, and renovate both the *ORGANS* and their *FUNCTIONS*.

'To operate in this manner seems to be the peculiar property of the Carlsbad waters. They are *ALTERATIVE*, and, in a certain sense, *TONIC*, for they seem to affect the system in the same way as alteratives do, by a gently purifying influence; and they gradually improve the strength, though not after the direct manner of the ordinary tonic medicines. The tonic effect is evidently the consequence of the alterative; for it is always the later of the two, and does not take place till the various functions of different parts are obviously improved. The alterative power seems to penetrate every organ and texture of the body, and to excite and regulate every secretion; while the tonic power seems to be the result of the restored healthy action of the body, similar to what takes place in a perfectly healthy constitution. In a healthy person, physical or animal power is the result of the general health of the body. So these waters, by their alterative power, restore every part of the body to a healthy state, and the effects of this are animal strength and vigour.'

'The first perceptible consequences of taking the waters are very slight; they gently promote perspiration, and the flow of urine: these are their mildest effects. Perhaps a person perceives the action of the bowels to be more regular and free, without being inclined to attribute it entirely to the water; though, upon reflec-

tion, he becomes convinced, in a few days, that it is so. The appetite and spirits improve in the same imperceptible manner—the nights are more composed, and the sleep sounder and more refreshing—then an unusual determination to some part of the body seems to take place, which is described as if all the small vessels of the part were roused from a quiescent languid state into one of activity; this is accompanied by a sense of fulness and stretching, as if the parts might even give way; and, when the head is thus affected, the sensation is oppressive and painful. These effects require watching; if they pass on favourably, the disease is gone, the constitution renovated, and restored to vigour, strength, health, and spirits.

‘The period during which these changes take place will vary considerably, according to the original constitution of the patient, and the nature of the disease.

‘I have seen some materially benefited in two or three weeks, others in six or eight weeks; while others may receive only partial benefit during that time, and have that benefit renewed as often as they repeat the waters. By the testimony of some who have drank the natural Carlsbad waters, as well as those in Brighton, I am informed that this is the case; and Dr. Kreysig states, that some complaints will disappear after several courses of the waters in successive years.’

Dr. King next proceeds to remark upon the *modus operandi* of the waters, their temperature, and, lastly, upon their composition. When treating of the last of these subjects, he justly observes, that those imitators of natural mineral waters who proceed upon the principle of simplification, generally err; and he gives the following proof of the necessity of imitating as closely as possible the natural spring:—

‘As one instance of the error of this proceeding, we may cite the experience of Dr. Struve. In his first attempts to imitate the Carlsbad waters, he had observed a small proportion of silex, about half a grain in a pint. Presuming, like others, that so small a quantity of a despised mineral could be of no consequence, he omitted it in his compound. He then observed, that the taste of the iron was perceptible in his compound, but not in the Carlsbad. In considering to what cause this might be attributed, he imagined it might possibly be owing to the absence of the silex: he then recomposed the water accurately, according to the proportions of the silex as well as of the other substances, and the iron was no longer perceptible. This fact was sufficient for his accurate mind; he no longer presumed to set up his conjectures in the place of facts, but adhered henceforth to the invariable rule, of including every part of the natural product in his composition, however trifling in quantity, or reputedly inert in quality. To this faithful accuracy his extraordinary success is to be chiefly attributed, but not entirely; for it required, in the first place, an accurate

analysis; and in the second, a sufficient machinery. The first he supplied by operating upon unusually large quantities. Instead of a few pints, he employed one, and even two hundred: from these he obtained, first, the carbonic acid, by distillation, and then, the solid materials, by very slow evaporation. Thus, though the quantity of iron in a pint of Carlsbad is only one-fiftieth of a grain, yet, in two hundred pints it would be four grains—a quantity easily appreciated. That his analysis did possess an extraordinary degree of exactness, is proved by the independent testimony of Berzelius, whose results are the same: and that the artificial waters of Dr. Struve present us with a compound precisely similar to the natural one, is proved by the analysis of one of the first of our own chemists, Mr. Farraday, to whom a quantity of the water was submitted for examination. Mr. Farraday informs me, that “he obtained results approximating very closely indeed to those stated to have been obtained by Berzelius from the Carlsbad waters. The differences were not greater than such as would be occasioned by the unavoidable errors of experiments on such minute quantities of matter.”

‘It is well known how extremely difficult it is to hold mineral substances in solution, particularly iron, for any length of time. The chalybeate of Tunbridge Wells, though very powerful at the spring, cannot be conveyed to London; and an eminent physician of the present day is doubtful whether it can be drunk with equal advantage even half a mile from the spring. Dr. Struve has overcome this obstacle by the ingenuity and perfection of his machinery, and can retain the solution perfect for many months.’

Before we quote Dr. King's remarks on the use of the different artificial mineral waters which may now be procured at Brighton, we shall give the Table of the Analyses of them, from which our readers may be able to form some idea of what they may accomplish, when their use is carefully and judiciously directed.

Table of Analyses of the principal Mineral Waters of Germany, by Dr. STRUVE, of Dresden.

| <i>Ingredients found in 16 ounces of Water in a dry state, in Grains.</i> | Carlsbad. | Ems. | Marienbad. Kreutz- brunn. | Auschowitz. Ferdinandsh. | Eger. Franzensb. | Pyrmont. | Spa. | Selters. | Seidenschütz. | Pulha. |
|---|--|---|---------------------------------|-----------------------------|---------------------|------------------|------------------|------------------|------------------|------------------|
| Carbonate of Soda | 9.695 | 10.750 | 8.26 | 6.197 | 5.00 | ..... | 0.7375 | 6.155 | ..... | ..... |
| Sulphate of Soda | 19.869 | ..... | 39.72 | 22.544 | 25.50 | 2.14566 | 0.0375 | ..... | 23.4960 | 123.8 |
| Muriate of Soda | 7.975 | 7.634 | 12.45 | 8.996 | 7.96 | ..... | 0.44949 | 17.292 | ..... | ..... |
| Sulphate of Potash ..... | ..... | 0.540 | 0.93 | ..... | 0.93 | 0.04194 | 0.07909 | 0.397 | 4.8940 | 4.8 |
| Muriate of Potash ..... | ..... | 0.045 | ..... | ..... | ..... | ..... | ..... | 0.358 | ..... | ..... |
| Carbonate of Lime | 2.37 | 1.1407 | 4.1300 | 4.016 | 1.847 | 5.98824 | 0.9850 | 2.1870 | 6.8060 | 0.77 |
| Sulphate of Lime | 0.0017 | ..... | ..... | ..... | 0.014 | 7.22132 | 0.01366 | ..... | 1.5050 | 2.6 |
| Fluate of Lime | 0.024 | 0.00192 | ..... | ..... | ..... | ..... | ..... | 0.0018 | 0.0156 | 0.0035 |
| Carbonate of Magnesia | 1.369 | 0.7887 | 3.0560 | 2.4 | 0.600 | 0.32352 | 1.12278 | 1.3780 | 1.0980 | 6.406 |
| Sulphate of Magnesia ..... | ..... | ..... | ..... | ..... | ..... | 2.69752 | ..... | ..... | 83.1380 | 93.086 |
| Muriate of Magnesia ..... | ..... | ..... | ..... | ..... | ..... | 1.12664 | ..... | ..... | 1.6300 | 19.666 |
| Nitrate of Magnesia ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 7.9070 | ..... |
| Alumina ..... | ..... | ..... | 0.0075 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Sub-Phosph. of Alum | 0.0024 | 0.0018 | ..... | ..... | ..... | 0.01478 | 0.00851 | 0.0027 | 0.0117 | ..... |
| Carbonate of Strontian | 0.007 | 0.0107 | ..... | ..... | ..... | ..... | ..... | 0.0192 | ..... | ..... |
| Sulphate of Strontian ..... | ..... | ..... | ..... | ..... | ..... | 0.02063 | ..... | ..... | 0.0463 | ..... |
| Carbonate of Barytes ..... | ..... | 0.0029 | ..... | ..... | ..... | ..... | ..... | 0.0019 | ..... | ..... |
| Silica | 0.577 | 0.4139 | 0.8800 | 0.669 | 0.568 | 0.49689 | 0.4985 | 0.302 | 0.1200 | 0.176 |
| Carbonate of Iron | 0.0278 | 0.026 | 0.1760 | 0.4 | 0.350 | 0.42846 | 0.3751 | ..... | 0.0127 | ..... |
| Carbonate of Manganese | 0.006 | 0.0037 | 0.0065 | 0.092 | 0.006 | 0.04352 | 0.0519 | ..... | 0.0042 | ..... |
| Carbonic Acid Gas in } 100 cubic inches ... } | 58 | 51 | 125 | 149.56 | 154 | 160 | 136 | 130 | ..... | ..... |
| Temperature (Fahr.) ... | Spru. 165. ^o Neu. 138. ^o Müh. 128. ^o Ther. 122. ^o | Kessel. 117. ^o Kränch. 84. ^o | 53. ^o | 49. ^o | 53. ^o | 56. ^o | 50. ^o | 58. ^o | 58. ^o | 58. ^o |

' I. — WARM WATERS. — *Carlsbad*. — There are four springs at Carlsbad, which differ from each other only in temperature:—The Sprudel, 165° Fahrenheit—Neubrunnen, 128°—Mühlbrunnen, 128°—Theressebrunnen, 122°.

' The coolest are the mildest. Patients always begin with the mildest, and proceed gradually to the hottest. The hottest, if begun with first, would probably cause determination of blood to the head, and other unpleasant or even dangerous symptoms.

' These waters operate upon the skin, the intestinal canal, and all the abdominal viscera, augmenting the secretions and excretions. They are not, however, mere purgatives, but alteratives, changing and improving the whole assimilative process. Hence they are useful in all abdominal obstructions, whether of the liver, spleen, pancreas, or mesenteric glands.

' They are efficacious in the cure of obstinate ague, jaundice, obstinate costiveness, hæmorrhoidal affections, some kinds of amaurosis, proceeding from abdominal obstructions, gall-stones, and predisposition to form calculi, or gravel, in the kidneys and bladder; in some cases of gout and chronic rheumatism, chronic cough, and asthma from indigestion, in some cases of nasal polypus, and obstinate external ulcers; in palpitation of the heart, when not dependent upon deranged structure; in suppressed, irregular, or painful menstruation, fluor albus, and even more serious diseases of the uterus, provided they are not cancerous; in cutaneous diseases, in nervous complaints originating in the abdominal organs, as hypochondriasis, hysteria, St. Vitus's dance, and catalepsy; in the debility which often follows measles and scarlet fever, and in counteracting the effects of some mineral poisons.

' They are prejudicial in a hectic habit, in a tendency to apoplexy, in scirrhus and cancer, in syphilis, and generally in inflammatory complaints. Sometimes they may be used with advantage though local inflammation should exist, provided this does not affect the general system, and provided the effects be carefully watched. The constitution may be gaining strength, while the local disease may be kept in check by topical applications, such as leeches, &c.

' The patient commences with the water of low temperature, and with two or three glasses of six ounces each, which are increased gradually to six, eight, or ten, and sometimes more, according to the effects; and the warm springs are exchanged for the hotter ones, as the disease seems to require. When the waters do not act upon the bowels, a small quantity of Carlsbad salts are taken with them, or a glass or two of Seidschütz.

' Generally, persons are restored to health in a gradual and almost imperceptible manner. In severer complaints no effects seem at first to follow from the waters: sometimes the disease appears to be aggravated; a sense of lassitude, irritability, and fear, may come on; after which these symptoms subside, the secretions and excretions become more regular and copious, and health gradually returns.

‘ During the time of drinking the waters, cold and chills should be carefully guarded against, particularly while the waters are acting on the surface of the body, in the early part of the day. The perspiration then induced, should be encouraged rather than checked; and if the patient expose himself to cold during that time, the consequences might be dangerous. It is for this reason, chiefly, that the waters are not drank in the winter; but, could a person observe these precautions, the waters would be beneficial in winter as well as summer.

‘ During the course, great regularity and temperance must be observed in the diet and general habits: the food should be of the most digestible kind, and little or no wine or spirits should be drank.

‘ A course may last from three to six weeks; and a second course may be taken during the season, after an interval of two, three, or four weeks. Some complaints may be entirely cured in one course—others may require a second or third—and some may find it necessary to drink the waters every summer, experiencing, during the rest of the year, a state of health which no other medicines can afford.’

‘ *Ems.*—There are two springs of the Ems water: The Kränchen, 117° Fahrenheit—Kesselbrunnen, 84°. They differ only in temperature, and either of them may be drank, as the patient prefers; but the warmer is the more powerful, as with the Carlsbad.

‘ These waters are very similar to the Carlsbad, but not so powerful; they have, for this reason, been called “The mild Carlsbad.” They do not act so much upon the bowels, but more upon the skin and kidneys. Being less powerful than the Carlsbad, they are more prescribed in similar diseases occurring in weak, delicate constitutions. They may also be used in some diseases of a doubtful kind, where the Carlsbad might be dangerous; particularly where tumours exist, suspected to be scirrhus. As their operations are mild, they can be watched in such cases with more safety, and relinquished if the effects appear injurious. They will often strengthen delicate lungs, disposed to hæmoptysis, and sometimes ward off threatening consumption, when tubercles do not exist. They are useful in all cases where a scrophulous constitution exists, and particularly for children where glands or joints are enlarged, and in rachitis. The quantity drank, the length of the course, and the precautions to be observed, are much the same as in drinking the Carlsbad.’

‘ II.—COLD WATERS.—*The Kreutzbrunnen, of Marienbad.*—This water is not so decidedly alterative as the Carlsbad. It acts more immediately, and more powerfully upon the bowels. It does not accelerate the circulation so much as the Carlsbad; and hence, is in less danger of producing determination of blood to the head, or any other part: it tends more to cool the constitution. It is, therefore, preferable when any inflammatory diathesis exists, and in full

habits of body. It frequently acts as a mild aperient, while from its penetrating all parts of the body, it has some alterative effects, though they are less decided than those of the Carlsbad. The directions for drinking it are the same as for the other waters.

The Ferdinandsbrunnen, of Auschowitz, and the Franzensbrunnen, of Eger:—These waters have a larger proportion of carbonic acid and iron, and a less proportion of carbonate and sulphate of soda; and hold an intermediate place between the Marienbad and the pure chalybeates of Pymont and Spa. The alterative properties of these waters are less than those of the Marienbad, but greater than those of Pymont and Spa. The Eger is a water much drank in Germany, and important cures are performed by it.

The quantity drank, and the precautions in drinking, are the same as in the Carlsbad.

Pymont and Spa.—These are purely strengthening chalybeates: on this account they more nearly resemble common medicines. Their effect upon the system is, however, more powerful; not from the quantity of their solid contents, but probably from the number of ingredients, their proportions, the mode in which they are combined, and the time and manner of drinking them. They assist the digestive organs, and excite the sanguiferous and nervous systems; they are useful in all cases of direct debility, where no abdominal obstructions exist; in the debility caused by severe diseases, as measles and scarlet fever; by over-exertion of body or mind, or loss of blood; in chlorosis, chronic diarrhoea, irregular menstruation, fluor albus, and in tendency to abortion from mere debility.

They are injurious in obstructions and indurations of the abdominal viscera, in hæmoptysis, in hectic habits, and in apoplectic predispositions.

The Spa is very similar to the Pymont, but more gentle in its effects. The dose must be varied according to circumstances, but it is not carried to the same extent as the Carlsbad. The same precautions must be observed.

Seidschutz.—These waters are gently purgative. They may be taken with any of the other waters when the bowels are confined; and are often useful preparatory to a course of any of the rest. The dose is from one to four glasses of six ounces each; but, if taken for any length of time, it produces flatulence, and a slight choleric inconvenience. It is a cooling aperient. Sometimes, in very irritable stomachs, it is taken in the evening as well as the morning, in divided doses.

We shall conclude our account of Dr. King's pamphlet with two out of the thirteen cases which it contains.

CASE I.—Dr. Struve had been engaged in examining the nature and properties of prussic acid. Having tried the effect of it upon himself, he brought on a paralysis of the left thigh and leg. (Vide Heidler über Marienbad, vol. ii. p. 13.) In order to obtain relief,

he went to drink the waters of Marienbad, and was entirely restored to health. The benefit he received, so much greater than he expected, and the leisure afforded by his residence there, turned his attention to the general effects of the waters, and their chemical analysis. He was then led on to examine the medical and chemical properties of other German waters, in which research he employed several years. In 1820, he prepared an imitation of some of these waters for his own use, and that of a few friends. The effects of these imitations so nearly resembled those of the natural springs, and the benefit received by his friends was so decided, that many applications were made by other persons to be allowed to drink the waters. In consequence of this, a public pump-room was established at Dresden in 1821, at Leipzig in 1822, and at Berlin in 1823; since which time, one has been opened at Warsaw, and at Königsberg. Many hundreds of invalids have resorted to these institutions, in preference to the natural springs. This is the case at Dresden, though not more than eighty miles from Carlsbad—a proof of the estimation in which they are held; and many of the most able physicians of Germany recommend the artificial waters as being of equal efficacy with the natural ones.

‘CASE IX.—A gentleman was subject to headach, arising from determination of blood to that part. He was occasionally cupped, with temporary, but not permanent relief. Upon taking cold, he was attacked with a fixed painful affection of the foot, resembling rheumatism or rheumatic gout. In this state he continued some months: he then commenced drinking the Marienbad water. For three weeks he felt no alteration: at the end of that time, the bowels became strongly affected—they sometimes acted thirty times in twenty-four hours. During this attack, instead of being weakened, he felt stronger and more cheerful. From that time his symptoms began to be relieved, and in another week he felt perfectly well. He had no return of pain in the head or foot, up to the time of his quitting Brighton, a period of several months.’

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. *Case of Rheumatism of the Heart cured by Acupuncture.*

MADemoiselle H., aged eighteen, of a good constitution, and of a nervous temperament, after residing some years in a very damp

house, became subject to pains in her arms, and subsequently in the lower extremities, which various means were found ineffectual to remove, until she changed her residence, when they became less severe, and soon altogether left her. At this time she began to be troubled with severe pain about the heart, resembling the pain she had previously felt in her arms and legs, and, like it, exasperated at the approach of rain, and during the prevalence of west or south winds, and when she was in any damp place: the pain was not continual, but its attacks were frequent, not only at changes of temperature, but also on the occurrence of any lively emotion, and they not uncommonly lasted many days: they were accompanied by palpitation, which daily became stronger; and sometimes by so strong a voluntary contraction of all the muscles, that the limbs could not be moved, or which only allowed the patient to place both her hands on the precordial region; and to press them upon it very forcibly. This attack would come on suddenly, without any indication of pain except, perhaps, a cry; and it would last from a quarter of an hour to three hours or more, being sometimes attended with a loquacity, a kind of ecstatic delirium, of which she had no remembrance when she revived. She then complained of excessive pain at the heart, the pulsations of which were immoderate. Bleedings, leeches, and various other means, were tried without effect. The application of leeches was invariably followed by an increase of suffering.

The patient had been thus affected for four years before she was placed under the care of M. Peyron, the narrator of the case, and in whose words we shall give the further detail of it.

‘I learned by mediate auscultation that the pulsations of the heart were stronger than natural; they were distinctly heard in the lateral and posterior parts of the left side of the chest, and even of the right side, and the ventricles communicated an impulse of much longer duration than the auricles: the pain was referred to the space between the fifth and eighth left ribs: the pulse was frequent, rounded, and intermittent.’

After stating his reasons for considering this a case of rheumatism of the heart, and for deciding on the employment of acupuncture, M. Peyron proceeds as follows:—

‘I proceed to describe the manner in which we introduced the needles, and the phenomena which resulted. The patient being placed on her back, and leaning a little to the right side, the first needle, thirteen lines in length, was introduced by rotating it in the space between the cartilages of the fifth and sixth ribs, in the place nearly corresponding to the middle of the cartilage of the latter: it was thence directed towards the heart obliquely from below upwards, and from right to left, but without reaching it. The patient felt no pain during the introduction; but when it was completed, she stiffened her limbs, and contracted them violently for some minutes, without speaking, and then fell into the kind of delirium described by the magnetisers; asserting that all objects were visible to her, although her eyes were closed; but always re-

turning erroneous answers concerning the number of fingers held up to her: she spoke with astonishing volubility, answered rather wildly to questions, and, what was very remarkable, could not bear to be touched in the slightest manner. This delirium did not last longer than ten minutes, when she seemed as if awaking from a profound sleep, felt herself much fatigued, had no memory of what she had been talking about, and complained of great pain. A second needle, fifteen lines in length, was then introduced in the same intercostal space, at a point corresponding to the sixth rib an inch before its union with the cartilage, and directed from below upwards, and from right to left. A second attack was the consequence; the patient became more loquacious than before: she complained of no pain, and wished another needle to be introduced. A third needle was introduced during the attack, in the same intercostal space, between but below the two former; this being the principal point to which the pain was referred, and in which the pulsations of the heart were most sensible. This needle was eighteen lines in length, and was directed upwards and inwards from the superior border of the cartilage of the sixth rib: it penetrated the pericardium, and without doubt reached the apex of the heart: the sensations communicated by it were different; the patient felt a sudden shock (*un saisissement*); and the attack was soon put an end to. This sensation, the length of the needle employed, the exact correspondence of its movements with the impulses of the heart, all proved a direct communication with this organ; and what added to our conviction was, that the needle was agitated before the intercostal space was affected by the heart's impulse. From that moment, the pain felt by the patient was, according to her own expression, quite different from what she had been accustomed to feel. The needles were allowed to remain about forty-eight hours, during which time the phenomena were a numbness, and an attack about the first hour, but of short duration. The pricking of the last needle gave her great uneasiness, and it was the only one of which the extraction, which was very painful, was followed by a few drops of blood. This needle was the most oxydated. From that time the patient felt no pain except in the course of the punctures, and that was not long complained of. The rheumatic pain completely disappeared, and has not returned, although the weather has since that time frequently been rainy, and sometimes for a fortnight together. —(*Revue Méd., Mai.*)

This case would be more satisfactory if the nature of it was not rendered a little problematical by its complications: still, however, it presents such curious particulars that we have thought it worthy of insertion.

II. New Doctrine of Temperaments.

THOSE who have frequently entertained doubts respecting the reality of the old division of temperaments, will hear with satisfaction that M. Thomas, physician to the hospital at Beaujon, has created one much more simple and tangible. The basis of this division is

functionomy, or the art of knowing the functions of the principal organs, that is to say, those of the cranium, of the thorax, and of the abdomen. The energy of the functions, according to M. Thomas, is always in direct relation to the volume of the organs; so that, by means of *cranioscopy* as regards the cranium, *thoracoscopy* as relates to the chest, and *abdominoscopy* as respects the abdomen, we may readily ascertain the prevailing temperament of any individual. There may, of course, be mixed temperaments, in which the cranial and thoracic functions, or the cranial and abdominal, or the abdominal and thoracic, may be delicately blended; but where any single temperament predominates, its character very materially depends upon its seat. Thus, if the cranium predominates over the thorax and abdomen, the individual has a *cranial temperament*, or an *encephalic constitution*, and may emulate Cæsar, Cicero, or Virgil, Brutus, Cassius, or Catiline, Pope, Tasso, or Jean Jaques Rousseau. But if the thoracic temperament has the ascendancy, the individual must be less aspiring, and content himself with being Hercules, or a baker, or a coal-heaver. If the rotundity of the abdomen declares the pre-eminence of the abdominal temperament, the constitution is undeniably ventral, and the propensities are peculiarly gastric. Melancholy examples of this temperament are to be seen, according to M. Thomas, in Germany and Holland, and also, we regret to confess, in England. It does not seem indigenous to France, being 'almost always acquired.' The author adds, that extremes are very commonly observed in England, and, in particular, very marked examples both of the cranial and abdominal characters. Doubtless our studious men present strong examples of the former; and there is no denying that very deplorable illustrations of the latter occur in the city, and among the farmers of Norfolk, Suffolk, and other counties. We could, at this moment, enumerate several instances in which the cranial and abdominal temperaments are very advantageously balanced; so that the abdominal suggestions restrain the cranial within the limits of reality, and the cranial preserve the abdominal from plunging the individual in utter disgrace.

This doctrine acquires a new interest in the hands of our author, when its principles are applied to the lower animals. Apes, it appears, may be distinguished by any of the temperaments; the dog is generally *thoracic*, and so is the horse, but the ass is decidedly *abdominal*; the ox not quite so much so, but rather *thoracico-abdominal*; but the most abdominal of all animals is the sheep, which accounts for its utter want of sentiment, its physical weakness, and its shortness of breath.

There is a *moral* attached to M. Thomas's doctrine, which is not to be neglected; for as no one can deny the importance of regulating the temperament so that the noble or cranial should rather prevail, it is very desirable that the means of accomplishing this end should be made known. The plan of M. Thomas is simply this:—'Favour the exercise of those organs which you wish to develop, and condemn to repose those which you wish to diminish.'

In this way a man may elevate himself above the condition of a sheep, at will, and from a mere alderman may diet himself into a legislator. We need say no more on the practical application of this doctrine: and, after all, we think M. Thomas is quite as wisely, and much more agreeably, employed in amusing himself with a new arrangement of temperaments, as some of his countrymen are in inventing new diseases, on the foundation of minute morbid anatomy; and the study of *abdominoscopy* seems to us to be quite as instructive as that of *dothineritis*.*—(Rev. Méd. Juin.)

III. *On the Use of Camphor in Acute and Chronic Rheumatism.*

SOME cases have been published in the *Revue Médicale*, by M. Dupasquier, illustrative of the benefit derived from camphor, particularly applied in the form of vapour, in cases of rheumatism. He was led to this practice by observing the success of M. Chèze, who, oddly enough, adopted it from a supposed analogy observed by him between rheumatism and tetanus. In acute cases, M. Dupasquier sometimes causes the fumigation to be preceded by bleeding; but in the cases related by him, the fumigations were employed without this precaution, and with marked and immediate advantage. M. Chèze employs the medicament as an internal medicine, and by friction, as well as in the form of vapour: M. Dupasquier limits himself to the latter mode, which he thus describes:—

‘The best method of administering the fumigations is by exposing patients to the action of the camphorated vapour with a proper fumigating case or apparatus; and as it is not always practicable to convey a patient labouring under chronic rheumatism to vapour baths, the portable fumigating cases of Dr. Rapou are very serviceable. When the patient’s circumstances do not enable him to have a proper apparatus, the camphor vapour may easily be administered by seating him in a chair placed over a small furnace, the furnace being covered by a metallic plate. The patient is then to be enveloped in a large blanket, which is to be tied close round the neck, and allowed to hang down to the ground. A small spoonful of camphor in powder may then be thrown on the metallic plate every five minutes: this soon becomes volatilised, and the parts of the body with which it comes in contact are in a short time covered with perspiration. This operation may be continued three quarters of an hour, or an hour, according to the facility with which the patients bear the high temperature of the vapour; and the patient is then to be wrapped up in the blanket and put to bed, where the perspiration will continue an hour or two; the absorption of the camphor being in this manner also encouraged.

‘Half an ounce is, generally speaking, enough for one fumigation, but much more may be used without inconvenience; and I have known a patient employ four ounces by mistake, without any bad consequences.’

* This name has lately been given to an acute inflammation of the cryptæ of the abdominal mucous membrane.

M. Dupasquier has employed the above method with signal, although not with invariable, success; and he has generally found that the more *mobility* there was in the character of the disease, the more readily it yielded. He generally encourages perspiration during the process, by giving some slightly sudorific drink. The fumigations are repeated according to circumstances: if the patient is strong, and severely affected, they are administered three or four times a day. In all cases, the plan requires to be persevered in for at least a week after the pains have disappeared. Sometimes partial fumigations only, which are much more easily borne by the patient, may be required.

In one case mentioned, the patient being afflicted with violent pain in the shoulder, and very unwilling to repeat the fumigations, was directed to wear a little bag of camphor under the axilla; and, in consequence, as M. Dupasquier believes, of the prompt absorption of the camphor, the patient felt a numbness in his arm about half an hour afterwards, and the pain was soon removed. The same application was frequently made afterwards, with the same effect.

IV. Ergot of Rye.

DR. BALARDINI, an Italian physician, has published some cases illustrative of the effects of this substance in accelerating delivery, or the expulsion of the placenta, when it is retained from defect of uterine contraction. He generally gives twenty or thirty grains, and repeats the medicine according to circumstances; and has so often found it returned when given in water or broth, that he always administers it in wine. It appears that the qualities of the ergot of rye have long been known to the Italian midwives.—(*Rev. Méd. Juin.*)

An ingenious plan of M. Mojon, of Genoa, by means of which he has succeeded in procuring the expulsion of the placenta in cases of alarming hæmorrhage, without the necessity of introducing the hand into the uterus, may here be noticed. His method is, after pressing out, as nearly as possible, all the blood from the umbilical vein, to throw into the placenta, through that vessel, a certain quantity of cold water, slightly acidulated with vinegar. This injection is to be promptly and strongly made; and in a short time the placenta will be safely delivered. The practice has succeeded, not only in the hands of M. Mojon, but of others to whom he has communicated it, and even in cases where the after-birth was retained from a want of power in the uterus. If the first injection fails, a second is to be introduced after allowing the first to escape. The quantity of fluid injected may be about sixteen ounces, (*un demi-kilogramme*). The venous system of the placenta is known to be very susceptible of dilatation and extension; and it appears, in the opinion of M. Mojon, that the impression of cold being rapidly communicated to the tissue by which the placenta adheres to the womb, determines its separation, and the hæmorrhage ceases in consequence.—(*Id.*)

V. *The Mad Village.*—(*Le Village des Fous en Belgique.* Par LE BARON VAN-W.)

THE village of Gheel, in the province of Antwerp, and the arrondissement of Turnhout, has a population of about 7000 inhabitants, and is remarkable for the number of lunatics and idiots it contains, and has contained for a considerable time back. It is supposed, although nobody can remember it, that these persons were some-time ago collected together in some sort of establishment or dépôt; but at present they are all scattered about among the farmers, where they are all occupied, but without any constraint, in different rustic labours, according to their age and strength. The liberty they enjoy, the free air they breathe, their occupations, and tranquil life, have, in many instances, restored to them those faculties which adversity, care, grief, and many other causes, scarcely known to the peaceable inhabitants of the fields, had deranged. It is the custom at Brussels, Antwerp, and many of the neighbouring towns, not to confine indigent lunatics to an hospital, in which such unfortunate people generally grow worse, but to send them all to Gheel: clothes are provided for them, and ninety florins a year each is paid for their board from the funds of the hospitals. When such lunatics arrive at Gheel, they are first taken to a house attached to the church, where a priest reads prayers with them, and administers to them the consolations of religion: after that they are divided among the farmers, who, although the sum paid for their board is very small, readily receive them, and take the greatest care of them. Such lunatics as belong to richer families are generally boarded in the village, or with the better sort of farmers; and, like those pensioned by the hospitals, enjoy full liberty, and employ themselves in agriculture. There is scarcely any farmer who is in tolerable circumstances who has not one or more of these lunatics in his house: they all seem to enjoy themselves very much, and to live with their hosts as if they were one family: they take their meals with them, and are, almost without exception, extremely docile, and in no respect given to excess. On this account, as well as from habit, the farmers have no kind of fear of them, but live with them in the greatest cordiality. Some of these poor people have been twenty years at one farm, without ever wishing to change, or seeming weary of their occupation.—(*Bull. des Sc. Méd. Journ. d'Agric. des Pays Bas. Le Globe.*)

There is something very interesting even in this brief account of the village of Gheel; and all who have any thing to do with the management of lunatics may keep in mind, with advantage, the good effects there exemplified of regular habits, air, exercise, occupation, and kind treatment, in this the most lamentable, and, generally speaking, the most hopeless of human afflictions.

VI. *Stricture of the Urethra.*

AN observation of what takes place when the urine is passed by patients affected with stricture of the urethra, has led Professor

Cittadini, of Arezzo, to adopt a particular mode of procedure, as regards the introduction of bougies. When such patients wish to evacuate the bladder, he remarks, that the urine is forcibly propelled from that viscus as far as the stricture; that it there stops for a few moments, and is filtered in small quantities through the constricted passage; but in a short time this filtration seems to effect a momentary dilatation of the stricture, the urine passing out in a full stream, even in cases where no kind of bougies can be passed into the urethra. The Italian surgeon has often imitated this dilatation with success; by means of injections, the bougie being introduced so as to prevent the return of the injected fluid, and has effected a cure in a few weeks, when all ordinary methods failed.—(*Rev. Méd. from the Annali Univ. de Méd. de Milan.*)

VII. Antidote to Prussic Acid.

PROFESSOR FREMI had lately an opportunity of confirming, by a singular circumstance, the fact of ammonia being an antidote to the poison of prussic acid. He wished to ascertain the strength of a grain of the acid, and before trying its effects upon a horse, he was desirous of making an experiment on a rabbit, in order to enable him to calculate the dose necessary to kill the former animal. He therefore applied two drops of prussic acid to the conjunctiva of a rabbit, which produced violent convulsions, soon followed by apparent death. The animal was thrown aside into a corner of the laboratory; and, whilst the professor was pursuing his experiments, his pupils tried to resuscitate the animal by means of friction, but without success. Recollecting the antidote which had been spoken of by Murray, they then employed friction with ammonia, by which means heat was restored, though not the motion of the heart. They now made haste to administer ammonia, suitably diluted in water, and in a few moments the animal began to jump about as well as it had done before the experiment. Surprised by this occurrence, the professor repeated the experiment of the prussic acid on another rabbit, but without endeavouring to revive it by the ammonia, and the animal died. Fifteen drops of the acid caused death to a horse in seventeen minutes.'—(*Repetor. Med. di Torino.*)

VIII. Aneurism of the Aorta, with Ulceration, Suppuration, and Opening of the Aneurismal Sac, without Hemorrhage. By M. DELORT.

On the 9th of Feb., 1826, Peter Sevasseur, aged sixty, entered the hospital Necker. He was of middle stature, and moderately muscular. He had worked as a tailor for a very long time, without experiencing any inconvenience, but about three years since had been subject to palpitation of the heart. His health, however, had undergone no material alteration till an attack of pleurisy, in the winter of 1825, from which time he had never been well long together. At length, about July last, his disorder became much

more serious; respiration was difficult, palpitation more frequent. The sternum, which had previously appeared more prominent, exhibited on its anterior left surface, and about the level of the fourth rib, a fluctuating tumour, which gradually increased. Till December he remained with little alteration. At this time, the difficulty of respiration was so great, that he was compelled to remain in a sitting posture, to prevent suffocation. In the course of December he was admitted into the Hôtel Dieu. Compresses dipped in pure water were applied to the tumour, and his diet was attended to. No other means were employed. After a few days the apex of the tumour opened, and a little blood issued out, mixed with pus. The opening remained fistulous, and continued to suppurate very abundantly for some time, but an eschar formed, and prevented the exit of the matter. In about three weeks another tumour formed in the situation of the former, and very soon equalled it in bulk. At this period, the patient presented the following symptoms:—countenance slightly flushed; emaciated; lips colourless; pulse small; very compressible. The sternum presented a remarkable prominence: there was an oval tumour, of the size of an egg, soft, fluctuating, and pulsating. The pulsations were synchronous with those of the arteries. In pressing the base of the tumour, which was slightly œdematous, we perceived a depression and a bony edge, indicating that the sternum was perforated in this part. About an inch higher, and nearly in the same direction, another tumour was manifest, exhibiting characters of the same kind, but in a less degree.

‘ March 14. The skin covering the apex of the tumour is become gangrenous, a small eschar is detached, and the sac lessened a second time. Some well-formed pus escaped, and some blood, rather discoloured. The next day, the tumour had disappeared. The aperture remained fistulous, and permitted a great quantity of ill-formed pus to escape. From this time, no pulsation could be perceived in the situation that the tumour had occupied. A probe, introduced into the fistular opening, appeared to be impeded long before it could have entered the mediastium.

‘ March 18. The general state of the patient remarkably changed: digestion was imperfect, diarrhœa supervened, and death took place on the 24th, without a struggle.

Examination of the body.—Body much emaciated: chest very prominent. Before opening this cavity, a probe was introduced into the fistulous opening, and passed without the slightest force from before, backwards, to the depth of nearly six inches. The abdomen was opened first; the ribs sawed about their middle, and the clavicles removed from their articulations. The sternum was raised from below upward, and presented, about the fourth rib, an opening of an inch in diameter; above, there was a second, corresponding to the small tumour that was observed externally; this was not more than four or five lines in diameter. The whole anterior portion of the thoracic viscera being exposed, a tumour of

the size of an infant's head of one year old was seen between the two lungs, and above the heart. A probe introduced into the opening, passed deeply into its substance. Its whole circumference was covered with a membranous sac, excepting at the point corresponding to the aperture of the sternum. Anteriorly the tumour was closely adherent to the pericardium, on the left with the corresponding pulmonary lobes; the right was free. This membranous covering, divided from above downwards, readily separated into right and left. An immense aneurismal clot was contained in it, almost puriform. Its facia corresponded to an opening of the aorta, and its density was equal to that of muscle, with which it had a great resemblance. This mass being raised, a cavity was found in its centre, containing fluid blood, which communicated with the arterial opening. This opening was at the posterior part of the sac, an inch above the left ventricle. It was fourteen or fifteen lines in circumference, its edges rounded, and slightly ossified. The pulmonary vessels were sound. The heart was hypertrophied, but without ossification.'—(*Nouvelle Bibliothèque Médicale*, May 1826.)

IX. Inguinal Hernia of the Right Side, without Protrusion of the Peritoneum. By M. COLSON.

THE history of this patient is given, but the dissection is the only part of the paper we shall transcribe. The abdomen being laid open; the stomach and small intestines were healthy. The anterior and right side was opened by an oblique incision from the umbilicus to the inguinal ring.

'1st. The cæcum folded upon itself, situated in the lower part, and, to appearance, less than usual.

'2dly. The peritoneum forming, behind the inguinal ring and the crural arch, a *cul de sac* all round the intestines, except at its posterior part.

'3dly. The intestine prolonged beyond the inguinal ring, and by the side of the crural arch.

'4thly. The great epiploon adherent to the peritoneum, and covering the internal side of the cæcum, near the appendix vermiformis, which, in this subject, was very long, free, and extended into the pelvis.

'5thly. In cutting the integuments of the scrotum, and of the groin, with scissors introduced into the wound and directed upwards, they divided the cæcum, adherent in its circumference to the surrounding parts.

'6thly. An attentive dissection of the ruptured portion of the cæcum did not enable us to discover any portion of the peritoneum.

'7thly. The spermatic chord was situated, as usual, at the posterior and internal part of the wound.'

The author has made some remarks upon the occurrence of this kind of hernia, particularly pointing out that the natural situation of the cæcum renders it susceptible of protrusion, without the peritoneum.—(*Nouvelle Bibliothèque Médicale*, March 1826.)

X. *Dislocation of the Vertebral Column, complicated with Fracture, and followed by Recovery.* Par M. J. CLOQUET, et M. PAILLOUX.

‘ THE subject of this observation, a mason, about forty years of age, and of a strong constitution, while occupied at the top of a house, fell to the ground upon a heap of stones, and was immediately struck with a complete paralysis of the inferior portion of the body. Removed to the hospital, and treated “suivant les préceptes de l’art,” the first symptoms quickly yielded, and the sensibility of the limbs remained, but the impossibility of motion continued: the urine was, at times, passed difficultly, and the constipation obstinate. These symptoms, treated with moxa, cupping, issues, and other similar means, were at first but slightly relieved. After, however, the perseverance of many months, the patient gradually improved, and so far recovered as to be able to move about, and turn himself upon his limbs, with the assistance of crutches. For many years he enjoyed a good state of health, and his strength manifestly increased; but deprived of his usual exercise, and, at times, wanting even the necessities of life, rheumatic pains and great disorder of the digestive organs ensued, and determined him to re-enter the hospital. The remedies employed, viz. baths of every kind, counter irritants upon the skin, &c. were all fruitless; he became more and more emaciated, and died in a state of complete marasmus, five months after his re-admission.

‘ *Examination of the Body.*—The inferior extremities extraordinarily emaciated, and a slight inequality in the lumbar region, altogether insufficient, however, to explain his death, and the preceding symptoms.

‘ In the vertebral column, a luxation was found. The second lumbar vertebra had been carried backwards, and to the right side, gliding upon the third vertebra, and dragging with it the superior part of the medulla spinalis. This vertebra, examined carefully with regard to the essential seat of dislocation, presented to us the following appearances:—The superior surface of the body of the vertebra which was directed upwards, a little to the left and forwards, remained united with the superior vertebra, and retained almost the same direction. Its inferior face turned downwards, a little to the right, and backwards, rested in part upon the transverse process, and the body of the following vertebra: its anterior surface directed forwards, a little to the right, and downwards, corresponded to exostoses, which were developed anteriorly, and secured solidity. Its posterior part directed backwards, slightly to the left and upwards, would have obliterated the vertebral canal, if it had not been split, and, as it were, opened. Its left extremity directed to the left, a little downwards and forwards, appeared crushed, and fastened between the first and third vertebrae. Its right extremity directed to the right, a little upwards and backwards, retained almost the same direction as the superior part of the column, while

it extended to nearly one half of the inferior vertebra. The right portion of this vertebra appeared to have been broken, and to have been reunited by an ill-formed callus, so that it had more length than in its natural state. The articulative processes of the left side retained their relation, and appeared to have been the first point upon which the superior part of the spine had undergone a motion of rotation from left to right. Those of the right side were entirely gone, and were half an inch distant from each other. The processes, generally, had undergone no alteration. It follows from this disposition of the bone, that the vertebral column had undergone many important changes in its whole arrangement. There was a decided flexion forwards, and to the left side, a rotation from left to right of the whole superior part upon the inferior, and a shortening of almost the whole length of the second lumbar vertebra.

The parts were consolidated—1st. By a large exostosis, developed before the body of the displaced vertebra, commencing on the left side, and prolonged to the transverse process of the inferior vertebra, to the body of which it adhered: 2dly. by fibrous, irregular, hard parts, and newly formed, which almost completely surrounded it, and with which the pillars of the diaphragm were confounded.

In the medulla spinalis the membranes were hard, thick, and confounded externally with the neighbouring ligamentous parts, and adherent internally to the fasciculi which constitute the chorda equina by means of numerous fibrous cellular filaments. The medulla itself remained untouched, since it did not extend to the seat of the fracture; perhaps it might be a little more voluminous than usual towards its inferior extremity; but the chorda equina was compressed and diminished in size on a level with the dislocation, strongly adherent to its membranes, and partly lodged in the separation of the broken vertebra. The nerves of the part were also diminished in size.—(*Nouvelle Bibliothèque, May 1826.*)

XI. On the Secretion of Bile.

To determine whether the bile is secreted from arterial branches, or from those of the vena portæ, it is necessary to tie the excretory ducts and the vessels which carry both kinds of blood to the liver. The ligature of these vessels, which has been considered impossible, may easily be performed in rabbits; but the bile being of a light colour, the results are not conclusive. It is done with more difficulty in pigeons on account of the hepatic artery; but in consequence of the positive consequences which may be drawn from the experiments, the following were made with these birds:—

1. *Ligature of the Excretory Vessels.*—The liver swells, and becomes filled with globules of a bright green colour, which colour spreads over the whole surface of the liver and neighbouring parts. In ten or twenty hours the animal evacuates, by the anus, matter absolutely green, of the colour of the bile in the gorged liver, which colour of the excrements increases until the death of the animal; and it was found that the green matter by which it was produced

only exists in the cloaca. This fact, with the observation of Prevost and Dumas, who have succeeded in increasing the biliary secretion by interrupting that of the urine, demonstrates that the kidney and liver assist each other more or less respecting the excretions of their respective products, when it cannot take place by the natural channel.

‘ 2. *Ligature of the Excretory Ducts, and the Hepatic Artery.*—At the end of twelve hours, the surface of the liver and neighbouring parts receives a colour; the canals become filled, and announce the presence of bile. In twenty hours, the liver contains a great quantity of green granulations, more numerous on the left than on the right side; the cloaca, also, contains green matter, as in the last instance. If the animal lives for forty hours, the green colour of the liver and excrements deepens. These experiments seem to prove that the separation of bile follows, and for a long time after the liver has been deprived of arterial blood.

‘ 3. *Ligature of the Hepatic Artery alone.*—In this case, the liver does not become gorged, the excretory ducts being open. After death it is found that the secretion of bile has continued, since it is found in the ducts; and also the matters contained in the intestines present their usual bilious colour.

‘ 4. *Ligature of the Roots of the Vena Portæ, and of the Excretory Ducts.*—The liver is then directly deprived of its colour, and has only a pale rose tint, like the lungs of the same bird; no trace of bile is to be found; the intestine contains a grey or whitish pulp; the cloaca is full of excrement, without the least trace or mixture of green; and notwithstanding which, many pigeons have lived in this state for thirty-six hours. Tying only the principal trunk of the vena portæ to permit the gastro-hepatic veins to enter, the right lobe which receives them, is at the end of fourteen hours in its natural state; whilst the left lobe is without colour, and presents, on its outside, merely a few traces of bile.

‘ From this series of experiments, it may be concluded—1. That the ligature of the hepatic artery does not impede the secretion of bile. 2. That the presence of bile becomes evident when the excretory ducts are tied. 3. That the blood of the vena portæ is that which furnishes the elements of bile, since by tying those vessels the secretion is arrested.’—(*Annali Universali, Decem.*)

XII. A Scheme for Investigating the Causes, Nature, and Seat of Indigestion.

‘ I. LEADING QUESTIONS, concerning

SPECIFIC
SYMPTOMS.

1. Their Nature; Intensity; Duration; Permanence and Locality.
2. Their Accession; Concourse; and Order of Succession.
3. Whether Increased or Mitigated by any particular Posture or Motion.

4. Assignable Causes.
 - a. The Patient's own belief.
 - b. Preceding Ailments.
 - c. Hereditary Predisposition.

| | | |
|---------------------------|-------------------------------|--|
| GENERAL SYMPTOMS. | Animal Functions. | <ol style="list-style-type: none"> 1. Strength and Regularity of Voluntary Motions. 2. _____ Sensations. 3. _____ Intellectual Operations. |
| | Vital Functions. | <ol style="list-style-type: none"> 1. Pulse, with respect to $\left\{ \begin{array}{l} a. \text{ Strength.} \\ b. \text{ Frequency.} \\ c. \text{ Hardness.} \\ d. \text{ Order.} \end{array} \right.$ 2. Respiration. 3. Animal Heat, $\left\{ \begin{array}{l} a. \text{ Its Degree.} \\ b. \text{ — Uniformity.} \\ c. \text{ — Equable diffusion.} \end{array} \right.$ |
| | Natural Functions. | <ol style="list-style-type: none"> 1. Appetite and Thirst. 2. State of the Tongue. 3. State of the Secretions. $\left\{ \begin{array}{l} a. \text{ Salivary.} \\ b. \text{ Cutaneous.} \end{array} \right.$ 4. ——— of the Excretions. $\left\{ \begin{array}{l} a. \text{ Alvine.} \\ b. \text{ Urinary.} \end{array} \right.$ |
| PARTICULAR CIRCUMSTANCES. | 1. Age. | |
| | 2. Occupation. | $\left\{ \begin{array}{l} a. \text{ Whether sedentary or active.} \\ b. \text{ ——— conducted in any particular posture.} \\ c. \text{ ——— in heated rooms, or in the open air.} \end{array} \right.$ |
| | 3. Former Habits and Customs. | $\left\{ \begin{array}{l} a. \text{ With respect to Diet.} \\ b. \text{ Activity of Mind and Body.} \end{array} \right.$ |
| | 4. Residence. | Climate. |

II. OCCASIONAL QUESTIONS, concerning

- FEMALES. $\left\{ \begin{array}{l} 1. \text{ State of Menstrual Discharge.} \\ 2. \text{ Married or Unmarried State.} \\ 3. \text{ Impregnation. Lactation. Number of Children.} \end{array} \right.$
 CHILDREN. 1. Dentition. 2. Former Diseases. 3. Diet, &c.

III. GENERAL OBSERVATIONS, upon

- PHYSICAL CHARACTER. $\left\{ \begin{array}{l} 1. \text{ Bulk and Stature.} \quad 2. \text{ Particular Conformation.} \\ 3. \text{ Complexion and Physiognomy.} \quad 4. \text{ Mobility and Irritability.} \end{array} \right.$

IV. COLLATERAL CIRCUMSTANCES.

1. Season of the Year. 2. Nature of Prevailing Epidemics.
 3. Weather. $\left\{ \begin{array}{l} a. \text{ Moisture and Dryness.} \\ b. \text{ Prevailing Winds.} \\ c. \text{ Abundance and quality of Fruits.} \end{array} \right.$

[See Dr. Paris on Diet, p. 244.]

XIII. Case of Inflammation of the Cerebral Veins.

'LATE observations, particularly in Britain, have shewn that inflammation of the veins is of more frequent occurrence, arises from

a greater variety of causes, and exists as the foundation of more diseases, than had been supposed when it was first taken notice of. It is now familiarly known as the consequence of venesection, and has been likewise frequently witnessed after ligatures of the veins. But it has been farther observed to follow ordinary operations, such as amputation, or lithotomy, when the vessel was simply divided; and, in consequence of that discovery, the surgeon can now account for several of the disorders subsequent to operations, which disorders were formerly unintelligible, or were referred to the vague influence of vulnerary irritation. Inflammation of the veins has likewise been remarked in internal diseases, and as arising, therefore, from internal causes. Thus, it has been detected in the abdominal, and particularly the hypogastric veins of puerperal women; and a few cases have been related of its occurrence in the internal veins of the head. The most distinct case of this nature hitherto published is one by Dr. Abercromby, in the 18th volume of the *Edinburgh Medical Journal*. The following, by Gendrin, of Paris, is a valuable addition to the list:—

‘A young woman was safely delivered of her third child; and during her pregnancy she had enjoyed excellent health, except that for the last month she had frequent headach, and a presentiment that she should die. A few days after delivery this presentiment became firmly rooted, in consequence of her observing a small quantity of blood to flow from the mamma when she was drawing the nipple with a bottle. From this time she complained constantly of pain in the left side of the head, and the milk ceased to be secreted. Leeches were applied to the head and vulva, but without any benefit. On the evening of the seventeenth day after delivery, the right arm and leg became benumbed, and she lost the power of moving the former. Next day the paralysis increased, and her speech was affected. On the subsequent day she was bled from the arm. When Gendrin first saw her, on the evening of the nineteenth day, the right arm was immovable and insensible, the right leg immovable, but slightly sensible, and both of them quite relaxed; the pupils were sluggish; the pulse 95, having been natural till that day; the urine discharged involuntarily; and she could speak only a few monosyllables. Next day great agitation supervened, the whole right side was quite insensible, the pulse rose to 136, and she had subsultus tendinum; blisters and leeches were ordered; and for two days afterwards her state improved considerably, the pulse falling to 96, and the palsied limbs having recovered some sensibility. But, on the evening of the twenty-second day, she had convulsive movements of all the limbs, rigidity of those which were palsied, and she frequently cried out. These symptoms went on increasing till the twenty-sixth day, when the left eye was found squinted upwards. Soon afterwards the contractions of the limbs ceased, she became quite insensible, and death took place the same evening.

‘The body was opened twenty-four hours afterwards, by which time, although in the month of February, putrefaction had begun.

The middle cerebral vein of the left side was enlarged to the size of a writing-quill, and its cavity was obliterated with yellowish puriform matter. The same vein of the right side was also similarly affected. The whole cavity of the superior longitudinal sinus was likewise obliterated, and in its place there was a greyish, brittle cellular tissue, infiltrated with yellowish pus. On the lower and external surface of the left middle lobe, and adjoining parts of the posterior and anterior lobes, there was a thin layer of blood adhering to the arachnoid coat; and the pia mater in the neighbourhood was injected with reddish serum. In the left hemisphere of the brain there was a purulent cavity, external to the ventricle, occupying the whole posterior and part of the middle lobe, as large as a hen's egg, containing pus, blood, and softened cerebral matter, and surrounded by red and brown points and streaks. The organs of the chest and belly were natural in appearance. The author thinks the order of the symptoms proves that the affection of the vein was the primary disorder and the cause of the rest; that the congestion and effusion succeeded it; and that the inflammation of the left cerebral hemisphere took place last, about the time when its characteristic symptoms, rigidity of the limbs, and frequent cries without apparent cause, were first observed.—(*Revue Médicale*, Avril 1826.)

XIV. Action of Poisons on Plants. By M. MACAIRE.

THE interesting memoir by M. Marcet, on the action of poisons on plants, with his conclusions, may be found abridged in a former number of this Journal. The experiments made by M. Macaire-Princip, and which he has published in a memoir on the influence of poisons on plants in which motion can be excited, are supplementary to those of M. Marcet; and we have been induced, by the interest they possess, to abridge them as follows:—

‘The first plant used was the *berberis vulgaris*. The six stamina of the flowers of this plant have the property of rapidly approaching the pistil when touched by the point of an instrument: the motion occurs at the base of the stamens: when cold, the motion is sometimes retarded. When put into water or solution of gum, the flowers may be preserved many days, possessing their irritability. The petals and stamens close at night, to open again in the morning. The stem of this plant, put into dilute prussic acid for four hours, occasioned the loss of the contractile property by irritation; the articulation became flexible, and might be inclined in any direction by the instrument. The leaves had scarcely begun to fade. On placing the expanded flowers on the prussic acid, the same effect took place, but much more rapidly.

‘The experiment being repeated, with an aqueous solution of opium, a similar effect was produced in nine hours.

‘Dilute solutions of oxide of arsenic and arseniate of potash were used: the stamens lost the power of approaching the pistil; but they were stiff, hard, withdrawn backwards, and could not have

their direction altered without fracture. It seemed like an irritation, or a vegetable inflammation.

‘ Solution of corrosive sublimate more slowly produced the same effects.

‘ Sensitive Plant (*Mimosa Pudica*). — Experiments were now made with this vegetable. When a leaf of this plant is cut, and allowed to fall on to pure water, the leaflets generally contract rapidly, but after a few moments expand, and are then susceptible of contraction by the touch of any other body. They may thus be preserved in a sensible state two or three days. If the section be made with a very sharp instrument, and without concussion, the leaves may be separated without any contraction. The branches of this plant may be preserved for several days in fresh water. Gum-water also effects the same purpose.

‘ When a cut leaf of this plant falls on to a solution of corrosive sublimate, the leaf rapidly contracts, and the leaflets curl up in an unusual manner, and do not again expand. When put into pure water, the sensibility does not return, but the whole remains stiff and immovable. A little solution of corrosive sublimate being put into a portion of pure water containing an expanded branch of the plant, gradually caused curling up of the leaves, which then closed and fell. If the solution be very weak, the leaves open on the morrow, and are still sensible; but ultimately contract, twist, and remain stiff till they die. Solutions of arsenic and arseniate of potash produce the same effects.

‘ A leaf of the sensitive plant was placed in a cold diluted solution of opium. In a few moments it opened out as in water, and after half an hour gave the usual signs of contractibility. In six hours it was expanded, and had a natural appearance; but could not be excited to move. The leaflets were flexible at the articulation, and offered a singular contrast to the state of irritation produced by corrosive sublimate. Pure water did not recover the plant. A large branch, similarly situated, expanded its leaves, but in half an hour had lost much of its sensibility; the leaflets, though alive, seemed asleep, and required much stimulating to cause contraction. In one hour the contractions ceased; in two hours the branch was dead.

‘ A leaf placed in prussic acid, (Scheeles strength,) contracted, then slightly dilated, but was quite insensible, and the articulations were flexible; water did not recover it. If the acid be very weak, the leaflets dilate, and appear to live well, but are insensible. A drop of the acid placed on two leaflets of a healthy plant, gradually cause contraction of the other leaflets, pair by pair. Solutions of opium and corrosive poisons have no effect when applied this way. After some time they dilate, but are insensible to external irritation; the sensibility returns in about half an hour, but the leaflets appear as if benumbed.

‘ The plant exposed to the vapour of prussic acid is affected in the same way; ammonia appears to favour the recovery of the plant.

' A cup containing dilute prussic acid was so placed, that one or two leaves, or sometimes a branch of a healthy plant, could be plunged into the liquid, or left to repose on its surface. The leaflets remained fresh and extended, but were almost immediately insensible. Being left in this state for two hours, they were expanded, and no irritation could cause their contraction, though otherwise there was no appearance of an unnatural state. At five o'clock in the evening the leaves were left to themselves. At nine o'clock they were open and insensible. At midnight they were still open, whilst all the rest of the plant and the neighbouring plants were depressed, contracted, and in the state of sleep. On the morrow they resumed a little sensibility, but seemed benumbed.

' In the same manner M. Macaire has interfered with other plants, as to the state of sleep; and observes, that prussic acid thoroughly deranges the botanical indications of time of Linnaeus.

' We may then, without altering the life of a sensitive plant, act directly on the organ, whatever it may be, by which it is enabled to accomplish these singular movements; and may we not infer, without being accused of bold suppositions, that these movements are not entirely dependant on those forces which preside over the nutrition of the vegetable?'—(*Bib. Univ.* xxxi. 244.)

XV. An Account of several Cases of Poisoning with Arsenic, in Illustration of the Delicacy of the Chemical Evidence, and Weight of the Evidence drawn from Symptoms. By ROBERT CHRISTISON, M.D., F.R.S.E., Fellow of the Royal College of Physicians, and Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.*

[From the Second Volume of the Transactions of the Medical and Chirurgical Society of Edinburgh.]

' So many cases of poisoning with arsenic have been published of late years, and their features have been generally so similar, that many will think some apology required for the following addition to the list. But in truth, however much has been already written on the subject, it must be plain to every medical jurist, that something still remains to be done, to complete our knowledge of it. The cases I propose to lay before the Society will be found, I hope, not altogether destitute of novelty. But at all events, they can hardly fail to draw the public attention to two important points, which, in this country particularly, and even in some parts of the Continent, have received but little notice; namely, the certainty with which, in a great proportion of instances, arsenic may be obtained in the state of a metal and of an oxide from the most complex mixtures, although its quantity is exceedingly minute;

* The excellence of this paper, and the importance of the subject, induce us to give it a place in our Journal.

and the possibility of sometimes giving a very strong, if not a decided opinion, from the consideration of symptoms only.

My remarks will arrange themselves naturally under two heads. In the first part of the paper I shall describe two cases, in which arsenic was detected by chemical analysis in exceedingly minute quantity. In the second I shall make some comments on the symptomatological evidence of poisoning by arsenic, with reference to a case in which its administration was very probable.

1. For a long time past, the attention of chemists and medical jurists in this country has been turned almost entirely to the liquid tests for arsenic. Four of them seem to have stood the ordeal of scientific criticism and legal altercation; but they have been found liable to many fallacies.

These fallacies arise from the possible or actual admixture of other mineral, vegetable, or animal substances.

Some mineral substances impede the action of the tests, and others give with them the same results as arsenic. These difficulties, it is true, have been fully appreciated and made allowance for; and, in consequence, if proper precautions have been taken, and the whole tests coincide, the evidence is quite satisfactory to a scientific man. But this accuracy has not been obtained without an almost total sacrifice of the simplicity of the analytic process; and, consequently, I fear that, after all, whatever a scientific man may think, it will not be easy to make the evidence appear satisfactory to judges and jurymen; so long, at least, as they require the professional witness to give the details of his experiments, and, at the same time, do not possess the knowledge requisite for comprehending them. It would be a matter of no little moment, therefore, if it could be shewn, as I hope to do, that the evidence from reduction and sublimation, confessedly more safe, may be likewise made more delicate than that derived from the use of the liquid tests.

The objections to the liquid tests are doubly strong, when the poison is dissolved along with animal or vegetable matters. The experiments of Rose, Jaeger and Roloff in Germany, and of Orfila in Paris, and more particularly those I had the honour of presenting to the Society about a year and a half ago, have proved, I apprehend to demonstration, that, for detecting arsenic in compound vegetable and animal fluids, when it is present in such proportion as we commonly meet with in medico-legal inquiries, not one of the liquid tests can be relied on: their effect is uncertain; and when it does occur, is inconclusive. I have farther shewn, that although several ingenious methods have been devised for destroying the colours of these mixed fluids, with the view of restoring the true action of the tests, yet none of them can be safely applied to medico-legal researches; for, when the proportion of arsenic is minute, it is either removed by the decolorising process, before the colour is destroyed,—or the precipitates do not lose their adventitious colour, although the liquid has been made colourless,—or the liquid retains its power of holding the precipitates in solution,—

or it is not decolorised at all,—or, finally, new sources of fallacy are introduced by the process.*

On the one hand, therefore, when the arsenic is mixed with mineral substances, the method of analysis by liquid tests is not more delicate than the simpler and less equivocal method of reduction; and, on the other hand, it is often inapplicable altogether, when the admixture, as happens in most medico-legal cases, is of a vegetable or animal nature.

For these reasons, I have been long convinced, that the whole attention of the medical jurist should be turned to the improvement of the method of analysis by reduction; or, at least, that the liquid tests should be made, what they ought to have always been, subsidiary merely to the development of the poison in its pure metallic or oxidised state. In pursuance of this object, I published, in the paper already mentioned, a process by which I was satisfied that so small a quantity as a fourth part of a grain might be presented in its characteristic metallic form, although it had been dissolved in eight thousand parts of the most complicated vegetable and animal fluids. The same process, I likewise shewed, was applicable to cases in which we are required to detect arsenic in the solid animal tissues, as in the coats of the stomach; and, in general, to all solid mixtures, in which the arsenic has not already formed, or cannot form, during ebullition in water, an insoluble compound. The fluids, in which I detected it in the quantity mentioned, were port wine, porter, tea made with abundance of cream and sugar, coffee made in like manner, strong barley-broth, and milk. At that time, an opportunity had not occurred to me of applying the process to the contents and tissues of the human stomach; but the following cases will shew that it is equally applicable to them also, and that I have by no means overrated its delicacy.

Before proceeding to relate them, however, it may be right to state, that, at the time my paper was read, I was not aware of a method having been published some years ago, which, even in its details, resembles closely the one I have recommended. It is cursorily noticed, but at the same time condemned, by Professor Orfila,

* ‘Edinburgh Medical and Surgical Journal for July 1824. In a paper in the *Annals of Philosophy* for October last, Mr. Phillips has replied to the objections I made to his decolourising process. I am prepared to answer his reply, and will do so by and by. Meanwhile I may mention, that it matters little which of us is right; for even if he succeeds in maintaining his ground, which I greatly doubt, it would only be in defence of a position, which the sequel of my paper will shew to be hardly worth keeping possession of. Besides defending his own process, he appears to me to hint darkly at certain objections which lie against mine. This is hardly correct, considering the use he knew I might make of it. In truth, I have applied it on the first occasion that occurred to me. As the result has been most favourable, and the only important link wanting in the chain of possible cases is now completed, by the application of the process to the analysis of the stomach and its contents, I presume to think that his objections will never assume a more substantial shape.’

in his Toxicology, and in that way had escaped my attention. It was devised by Dr. C. H. Roloff, and had been minutely detailed by him in Kopp's Jahrbuch for 1812. It is shortly the following:—The fluid is first treated with nitric acid, which throws down much of the animal and vegetable matter; the acid is then neutralized by ammonia or potash; to this solution sulphuretted hydrogen-water is added, as long as any precipitate falls down; and, finally, the sulphuret is collected, dried, and reduced in a tube, with charcoal and carbonate of potash. If the stomach itself is to be analysed, then the process commences with digestion in caustic potass, after the method of Rose.* I need hardly point out the differences between Roloff's plan and my own. They are chiefly, that, in the case of the stomach, digestion in water is substituted for solution in caustic potass,—that the only preparation the fluid has to undergo, but a very essential one, is the acidulating it with acetic acid,—that a stream of the gas is substituted for the sulphuretted hydrogen-water; and that it is recommended to expel the excess of the gas by boiling,—another precaution very essential to success.

‘I have said Professor Orfila condemns Roloff's process. As his objection, if valid, would apply to mine also, I must take notice of it. He alleges, that the sulphuret of arsenic is not nearly all decomposed by the process of reduction; and he grounds the allegation on a statement made by Roloff himself in his paper; for, from $2\frac{1}{2}$ grains of precipitate, Roloff procured only an eighth of a grain of metal.† If Orfila, however, had either made the experiment himself, or read Roloff's paper with care, he would not have ventured a criticism so unworthy of the professor of medical chemistry. Roloff obtained his precipitate by treating adulterated vinegar with sulphuretted-hydrogen. This precipitate, therefore, was not pure sulphuret of arsenic, as Orfila assumes, but consisted chiefly of vegetable matter. That all the arsenic contained in it was disengaged by the process of reduction, is satisfactorily proved by Roloff, by the conversion of the sulphuret of another portion into arseniate of potass, and of that into the arseniate of lead. The quantity of arsenic in the sulphureous precipitate, when estimated in that way, agreed almost exactly with the actual quantity procured by sublimation.‡ In point of fact, I have frequently reduced both the pure and the animalised sulphuret, and never experienced any difficulty in decomposing it almost, if not quite entirely.§

[To be concluded in our next.]

* ‘Jahrbuch der Staatsarzneikunde, v. 147—159.’

† ‘Toxicologie Générale. 1st edit. i. 167. The objection is repeated verbatim in the 2d edition, published in 1818.’

‡ ‘Jahrbuch, &c. p. 159.’

§ My friend, Dr. Turner, lecturer on chemistry here, has remarked, that if there is a considerable excess of sulphur, as when the arsenic is thrown down by the hydrosulphate of ammonia, from a solution containing nitric acid, then the metal is not sublimed at all with the heat of a spirit-amp. It

SECTION II. — INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. Vaccination.

THE king of France, in order to encourage vaccination, has accorded prizes to those who vaccinate the greatest number of individuals in each year. The list of those who were thus honoured in consequence of their exertions in 1824, has recently been published. The first prizes were accorded to M. Blanchard, 'officier de santé,' at Baud, and M. Nollet, also of the same rank, at Nancy. An 'officier de santé' is an inferior medical degree. Medals of gold were also presented to four other vaccinators; and silver medals, two to each province, have been sent all over the kingdom. In an eloquent oration made by M. Moreau, at one of the public sittings of the French Academy of Medicine, lately held in the Louvre, and very numerously attended, the alarm which prevailed last year in Paris, on account of the occurrence of some cases of small-pox, after vaccination, was spoken of at some length. Several instances were cited, in which cases which had been reported to be very severe, were found extremely slight, and devoid of danger; and the insignificant number of these cases of failure was contrasted with the many millions who, in France alone, have been preserved from small pox by vaccination, and with the fact, that for many years the small-pox has never made its appearance in the Parisian colleges, the Polythémique, and other military schools, or, in short, in any of those establishments in which are 'the elite of the youth, and of the hopes of France.' We are glad to perceive that the statements were received with unequivocal marks of satisfaction by those to whom they were addressed.

II. Singular Mode of Syphilitic Infection.

A YOUNG woman put some rings into her ears, which had been laid by for eight years: swelling of the ears soon succeeded, and soon afterwards an eruption of red, dry, copper-coloured spots on the face, breast, and body. They appeared to have a syphilitic character, and Van Swieten's liquor was prescribed with success.

A man who cohabited with this girl was in turn affected with the same kind of eruption, which was similarly cured. The most scrupulous examination failed to detect any local symptom in the genital organs (we believe this observation is meant to apply to both cases); and, on the other hand, it appeared that the earrings had belonged to a woman who died of syphilis in its most aggravated form. M. Dupont, who relates these circumstances, considers

is not easy to assign a reason for this, unless we suppose that a fixed compound is formed of sulphur, potass, and arsenic. I have verified the fact. Of course, it does not affect the validity of the process with 'coloured hydrogen.'

that the earrings were really the medium of infection.'—(*Rev. Méd. from the Repertor. Medico-Chir., &c. di Torino.*)

With respect to all relations of this kind, we should think ourselves justified in entertaining many doubts before believing the facts asserted.

III. *Spina Bifida.*

IN the *Revue Médicale* for May, a case is inserted by M. Labonne, fils, in which the tumour, in an example of spina bifida treated by him, disappeared after he had made five small incisions or punctures near it. A lemon-coloured serum escaped by them for about a week, and the tumour then subsided. Emollient cataplasms were applied, and some pressure was employed to the head. An eruption, resembling flea-bites, followed; and, on the suppuration of these pustules, the tumour wholly disappeared.

IV. *Encephalitis.*

'DURING the months of July and August, sixteen cases of encephalitis (*phrenitis*) were presented at the hospital at Turin, the subjects of most of which were masons, employed in the various buildings now erecting in that city, and exposed, even in the middle of the day, to the intense heat of the sun. Several of these unfortunate persons, when attacked, fell down as if apoplectic, or with dreadful pains in the head, their eyes injected and shining, or furiously delirious, or with a high degree of fever, &c. By the prompt employment of bleeding from the jugular vein, leeches to the temples, "revulsive bleedings," and tartar-emetic, the latter in very large doses, all the cases, two excepted, were successfully treated.'—(*Repertor. Méd. di Torino.*)

V. *Congenital Obliteration of the Canal of the Intestines.*

IN a child examined at the hospital of the *Enfants-Trouvés*, at Paris, and which had only lived three days, during which there was no alvine evacuation, but a continual vomiting of yellow matter, M. Baron found the duodenum much dilated, and terminating in a complete *cul-de-sac*, at the point where it communicates with the jejunum. The jejunum and ileum formed a very narrow canal, not larger than the ureter, and the ileum terminated in the cæcum by a little circular prolongation; the large intestines were scarcely of more considerable volume. The obliteration of the duodenum appeared to be formed solely by the mucous membrane, the two other tunics being continued on to the jejunum, without interruption. No meconium was found in any part of the canal, a circumstance which is at variance with the reports of other cases in which meconium is said to have been found in the different parts of the intestinal canal, even when there was a complete division between them.

VI. *Aneurisms.*

M. LARREY presented two of his patients at a sitting of the French Academy, in April, both affected with aneurism, which,

in both, was proceeding towards complete cure: one was a varicose aneurism of the external iliac vein, which had succeeded to a wound made by the point of a sabre: the other an encysted or 'false consecutive' aneurism of the right carotid artery, near the arteria innominata, and caused by a stroke with a sword. Both patients had, in the first instance, been treated according to Valsalva's method, afterwards by the application of ice, and subsequently by moxas, applied near the seat of the disease.—(*Rev. Méd.*)

VII. *Mental Disorders.*

M. BAYLE has recently published a work on this subject, in which, in accordance with those views of which some account was given in a foregoing Number, the proximate cause of the different kinds of insanity is stated to be a chronic inflammation of the membranes of the brain; and he has endeavoured to trace, with great exactness, the precise lesions which give rise to the various forms of mental derangement; deducing also, as it is said, important consequences as regards the opinions which have been entertained concerning the different parts of the brain. The chronic inflammation, designated by M. Baron, is not the result or consequence of acute inflammation, but of a character perfectly distinct from it.

VIII. *Moxas.*

SOME of the Parisian physicians have lately made use of moxas composed of the cotton usually employed, combined with the pith of the elder. It is objected to this form, that moxas so composed burn too quickly, and consequently produce too little pain, and too superficial an eschar.

IX. *On the presence of Iodine in Mineral Waters.*

EXTRACT of a letter from M. Liebig to M. Gay-Lussac:—'I have lately been occupied in the analysis of the mineral waters of our country, (Darmstadt,) and I find that all these waters contain hydriodic acid in larger or smaller quantity. It is by the use of aqua regia, diluted with sixty times its weight of water, and by starch, that I have succeeded in discovering the smallest trace of this body in the mother-waters of these waters.

'The saline water of Kreutznach (Theodorshalle) is remarkable for the large quantity of hydriodic acid, or iodine, which it contains; besides this body, the muriates of lime and magnesia are present. I mixed six pounds of the mother-water of this water with sulphate of soda, and after having separated the sulphate of lime, I evaporated the liquor until the greatest part of the common salt was crystallized. The dark brown liquid which remained, distilled with its weight of sulphuric acid, gave 0.253 grammes (3.9 grains) of iodine.'—(*Ann. des Chim.* xxxi. 355.)

X. Report of the Meeting of the Associated General Medical and Surgical Practitioners of England and Wales.

AT a General Meeting of the Members of 'The Associated General Medical and Surgical Practitioners of England and Wales,'* held on the 5th of July last, the following report was read:—

'Faithful to the trust reposed in them, your committee respectfully submit to the General Meeting a report of their proceedings during the last year.

'From the passing of the act of 1815, commonly called 'The Apothecaries' Act,' the committees, successively appointed by the association, have been anxious to extend the salutary provisions of that law, and to remedy its glaring defects, as well as to increase, through more efficient examinations, the usefulness of the practitioner, and the respectability of the profession to which he belongs.

'Early in the last Session, your committee determined on renewing their application to Parliament; and after a conference of the deputation (formerly appointed) with Mr. Hume, they resolved to present a petition on the subject of those complaints, which the Apothecaries' Society continued to overlook, or affect to despise, even while (under the dread of losing their cherished act altogether) they were remodelling their court of examiners, and improving their methods of examining candidates.

'Meanwhile the conduct of the council and court of examiners of the Royal College of Surgeons having excited much animadversion, and produced a disposition generally on the part of the profession to remonstrate on the impropriety, and even the injustice of certain newly-adopted regulations of theirs, it occurred to your committee that, as persons entrusted by a numerous and highly-respectable portion of the professional public with its welfare, it was particularly incumbent on them to take the necessary steps for shewing their sense of the extraordinary conduct of the college; to assist in redressing the evils which were likely to arise both to the community and to the profession, from such conduct as had recently been displayed; and especially to put the practice of midwifery into such a state as would better secure the safety of human life.

'That the deliberations contemplated might have all the aid which could be derived from numbers, experience, and talent, it was resolved to call a meeting, not merely of the members of this association, which might appear much too limited for the inquiry, but of general practitioners, who might represent fully the feelings and wishes of the majority of practitioners, resident in or near the metropolis; and, further, under these circumstances, your committee deemed it fair to defray out of the funds of the association all the expenses that should accrue from convening

* This society has hitherto been known by the title of 'The Associated Apothecaries, and Surgeon-Apothecaries of England and Wales.'

such a meeting; but once assembled, it would remain for that meeting, out of its own resources, to adopt and prosecute such remedial measures as might seem to them best suited to the occasion.

‘Your committee believed, that in thus acting they were, without departing from the tenour of their injunctions, performing an important public duty: and that the great body of general practitioners would gladly avail themselves of the opportunity thus afforded to express the sentiments they entertained on very various subjects connected with the profession, and to concur in such measures as might appear just and necessary.

‘The meeting which was held on the 25th of February last (a great majority of which were members of the College of Surgeons), abundantly confirmed the propriety of the reasoning of your committee: it was very numerous, and most respectably attended, and the resolutions then proposed, and at a subsequent meeting confirmed, became the foundation of a petition to the House of Commons, which, after specifying the existing grievances, prayed the Honourable House to institute an inquiry into the present state of medicine throughout England and Wales—to cause efficient examinations as to the qualifications of all persons about to practise medicine or midwifery; and to adopt such other measures as in the judgment of the Honourable House might seem necessary for the remedying of the alleged abuses.

‘This petition, numerously signed, was presented to the House of Commons by Mr. Hume, on the 9th of April, and was ordered to lie on the table. That no discussion was entered into on its merits was undoubtedly owing to the extreme pressure of public business, the shortness of the Session, and to the meditated dissolution of Parliament, which has since taken place.

‘Various letters from eminent practitioners resident in the country, expressive of their concurrence in the measures adopted at those meetings, and the subscription cheerfully entered into to defray the expenses incurred, are satisfactory testimonials that the course resolved upon was very generally approved; while the whole tenour of the resolutions passed at those two meetings demonstrates the disinterested conduct and liberal views of the gentlemen who took the lead on those occasions.

‘Thus, without the smallest deviation from the principles of the association, your committee have zealously endeavoured to ascertain the sentiments and wishes of a still more extensive class of the profession, and induced them to apply to Parliament for the removal of evils, which can be obviated only by legislative enactment—sensible, that they could not possibly obtain for the public on the one hand, and the profession on the other, a greater boon than a free and comprehensive inquiry into the present state of medicine, the abuses in which are continually extending themselves, and calling with a louder voice for investigation and redress.

‘If there were any persons who entertained a hope, that, on a future application to Parliament, the Apothecaries’ Society would

so far consider the feelings of practitioners, and the dignity of the profession, as to withdraw the odious clauses in their Act, so often and so indignantly complained of, they must now be convinced that such a hope can no longer be reasonably entertained. Within these two years that society have been twice before the legislature : it is painful to observe, that the maintenance of the Act of 1815, with nearly all its original imperfections, and teeming with degradations, has seemed of more value in their eyes than the respect of their medical brethren, or even the honour of the profession itself.

‘ Your committee, therefore, earnestly recommend to their successors, collectively and individually, to use their utmost endeavours to obtain and diffuse information as extensively as possible ; and, immediately after the meeting of Parliament, to present petitions to both Houses, of similar import to those already submitted ; not doubting that, as no power can render error perpetual, an enlightened legislature will sooner or later perceive and remedy all the grievances complained of, and place on its proper basis a profession so highly important to the public good.

‘ The expenditure has been kept within as narrow limits as possible ; and the committee confidently trust, that in this as in all other instances, the members of the association will recognise an earnest desire on the part of your committee to render their labours subservient to the welfare of the community, and to the respectability and usefulness of the general practitioner.’

XI. On the Qualifications of Medical Officers in the Army.

Hospital Assistant.—The candidate for this appointment in the medical department must be unmarried, not under twenty-one, nor above twenty-six years of age ; he must produce certificates of having served a regular apprenticeship of not less than three years, to a member of either of the Royal Colleges of Surgeons of London, Dublin, or Edinburgh, will be preferred ; and, of attendance for one year at least, in an hospital or infirmary of celebrity : without apprenticeship, two years’ attendance in an hospital, with one on practical pharmacy, will be required. He is to possess a diploma from one of the royal colleges mentioned, and must exhibit certificates of regular courses of study in the following branches of professional knowledge, at established schools of eminence, viz. :—

| | Months. |
|---|---------|
| Anatomy - - - - - | 18 |
| Practical Anatomy - - - - - | 12 |
| Chemistry - - - - - | 6 |
| Materia Medica - - - - - | 3 |
| Surgery - - - - - | 6 |
| Theory of Medicine and Physiology - - - - - | 6 |
| Practice of Medicine - - - - - | 6 |
| Botany - - - - - | 6 |

And of clinical lectures on the Practice of Medicine and Surgery.

It will be considered an additional recommendation to gentlemen entering the service to have attended lectures on forensic medicine, and public establishments for the treatment of diseases of the eye and skin, and of mental derangement.

Gentlemen who have had an university education will be preferred: it is desirable that all should have studied natural philosophy, mathematics, and natural history in all its branches; but a liberal education, and a competent knowledge of the Greek and Latin languages, are indispensibly requisite in every candidate.

The greater the attainments of the candidates in various branches of science, in addition to competent professional knowledge, the more eligible will they be deemed for promotion, for selections to fill vacancies will be guided more by reference to such acquirements than to mere seniority. With the above-recited qualifications, they are entitled to promotion as assistant surgeons and regimental surgeons; but every gentleman must have served five years at least in the junior appointments before he can be promoted to the rank of regimental surgeon, and he who gives the best proofs of diligent exertion in the performance of public duty, of attention in the acquirement of practical knowledge, taking every opportunity of adding thereto, will be noted as the most eligible candidate for advancement.

Gentlemen already in the service are earnestly recommended to avail themselves of every opportunity of adding to their knowledge by attending universities or schools; for which purpose every facility in his power will be afforded by the Director General. They are especially desired to transmit to this office the statements of such classes as they may have attended subsequently to the examinations before this board, either on professional or other branches of science, that the same may be duly registered; and every gentleman must be prepared for further examination before he can obtain promotion, or return to the service from the half-pay list.

Medical officers are encouraged and recommended to look forward to the appointment of surgeon to the forces, and of physician to the forces; and to endeavour especially to qualify themselves for either, according to the best of their inclinations, and to their previous study.

For the commission of surgeon to the forces, it is expected that the candidate shall have attended a public hospital of celebrity at least two years; and it is desirable that one of them should have been passed at a London hospital.

The rank of physician to the forces requires, in addition to the knowledge and experience to be gained in the regular progress of study and of service, that the candidate should be a Fellow or Licentiate of the Royal College of Physicians of London, or a Graduate of the University of Oxford, Cambridge, Dublin, Edinburgh, Glasgow, or Aberdeen.

Although the British schools are specified, it is to be under-

stood that candidates who have received regular education in approved foreign universities or schools will be admitted to examination.

J. M'GRIGOR, *Director General.*

W. FRANKLIN, *Principal Inspector.*

Army Medical Department,
1st July, 1826.

Clinical Report of the most prevalent Diseases during the preceding Month.

THE early part of this month was extremely hot, and the drought continued till the 20th, with the exception of very slight showers. It has, indeed, been so complete, that in many places the springs were completely dry, and the cattle were driven several miles to water. A considerable quantity of rain has fallen since the 18th, and it is much cooler.

This month has been, as usual, very healthy, nor has any disease been prevalent, the source of which could be distinctly referred to the season. Measles have been frequent, and their common consequence, inflammation of the lungs, and mesenteric disease. Where, however, application has been made for early relief, they have quickly yielded to antiphlogistic remedies. Headach, and giddiness, &c., were very troublesome in the beginning of the month, and were only relieved by bleeding. The dyspeptic complaints have been accompanied with more frequent and more marked depression of spirits than is commonly the case. In most instances this was distinctly traceable to the difficulties of the times. In the middling classes of life, affections of the head, and a total loss of energy, have been frequently met with, and proceeding from the same cause. Rheumatism, especially in the shape of arthritis rheumatica, has been common, but readily removed by tincture of colchicum, and decoction of bark, with aperients. A few cases of cholera have occurred; but those which we have seen were very mild—in one case only was there any cramp. Fever, in a mild form, has been more prevalent; in one or two instances the disease has been fatal, with delirium and complete typhus. The cases that within our knowledge thus terminated, had always been neglected in the earlier stages. No particular organ seemed to be more frequently affected than another; but in one, the head—in another, the lungs—and in another, disorder of the bowels predominated.

We have had the opportunity of examining the body of a girl, of seventeen years of age, who died from disease of the kidney. The case was curious, from her having experienced no pain whatever in her back till a month before her death. When first seen, she complained of general dropsy: her limbs were greatly swollen, and there was manifest fluctuation in the abdomen: the urine very acrid, came away stillatine: she had diarrhœa. She was confined to her bed for a month before her death; and, from this time, complained bitterly of the pain in her loins. There was no

abdominal tumour. On opening the abdomen, the bowels were healthy externally. No inflammatory action appeared to have had place in the peritoneum. The smaller intestines were ulcerated extensively. The spleen, liver, &c., were healthy. The right kidney was four or five times its natural size; and externally lobulated as distinctly as in the kidney of a child. On cutting into it, it was entirely filled with scrofulous matter, the natural structure of the kidney being quite destroyed. The left kidney was similarly enlarged, but contained no matter. The cortical part was changed into a granulated, fatty substance; but the striated part was still distinct. There was no further disease about the body. The dropsical effusion was removed in a week after she came under our care.

NOTICE OF LECTURES.

DR. COPLAND will commence his Winter Courses of Lectures on the first Monday of October, on the *Practice of Medicine*, including Physiology, Pathology, and the Diseases of Women and Children; and on *Chemistry* and *Materia Medica*, embracing Pharmacy and Medical Botany. Examinations are given; and the Courses are illustrated by Specimens and Drawings. The first Ten Lectures are introductory, and are on the Natural and Moral History of Man, as related to the Study of Medicine. These Introductory Lectures are open to all Students.

LITERARY INTELLIGENCE.

Dr. Forbes, of Chichester, is preparing for early publication a translation of the new and greatly improved edition of Laennec's Treatise on Diseases of the Chest, and which will be enriched with Notes and Commentaries by the Translator.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. Remarks on the recent Effort to Subvert the Charter of the Royal College of Surgeons; with Animadversions on the evil tendency of "The Lancet," and Observations respectfully addressed to General Practitioners, on the best means of maintaining their Privileges and Respectability. By William Cooke, Member of the Royal College of Surgeons, Secretary to the Hunterian Society, Editor of an "Abridgment of Morgagni," &c. 8vo. Pp. vi.—90. Underwoods. London, 1826.
2. Observations on the Efficacy of White Mustard Seed in Affections of the Liver, Internal Organs, and Nervous System; and on the General Management of Health and Life. By Charles Turner Cooke, Consulting and Operating Surgeon, at Cheltenham. Third edition. 8vo. Pp. 119. Gloucester, 1826.
3. A Catechism of Anatomy; with Plates. (Pincock's.) Whittaker, 1826.

THE METEOROLOGICAL JOURNAL,

From the 20th of JUNE, 1826, to the 19th of JULY, 1826.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50 High Holborn.

| June. | Moon. | Rain Gauge. | | | Therm. | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|-------|-------|-------------|------|------|---------|----------|---------|----------|------------------|----------|---------|----------|------------------|---------|----------|
| | | 9 A. M. | Max. | Min. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 2 P. M. | 10 P. M. |
| 20 | | 64 | 71 | 52 | 30 | 30 | 30 | 30 | 61 | 66 | ENE | ESE | Fine | Fair | Fair |
| 21 | | 61 | 67 | 53 | 29 | 25 | 30 | 24 | 65 | 74 | NNE | NE | Clo. | sRain | |
| 22 | | 66 | 75 | 52 | 30 | 20 | 30 | 21 | 72 | 72 | NE v | E | Fair | Fine | Fair |
| 23 | | 57 | 73 | 52 | 30 | 24 | 30 | 25 | 79 | 59 | NE | NE | | | |
| 24 | | 65 | 78 | 57 | 30 | 25 | 30 | 22 | 61 | 63 | ENE | ENE | Fine | | |
| 25 | | 73 | 79 | 57 | 30 | 17 | 30 | 13 | 53 | 61 | ESE | E | | | Fine |
| 26 | | 67 | 83 | 65 | 30 | 08 | 30 | 00 | 61 | 61 | E | E | | | |
| 27 | | 70 | 86 | 70 | 29 | 86 | 29 | 89 | 62 | 58 | NNW v | S | | | Clo. |
| 28 | | 75 | 88 | 65 | 29 | 92 | 29 | 99 | 61 | 62 | SW v | SW | s Sho. | Fair | |
| 29 | | 76 | 81 | 64 | 30 | 03 | 30 | 06 | 63 | 72 | W | W | Fine | | |
| 30 | 1, | 70 | 82 | 66 | 30 | 06 | 30 | 03 | 66 | 61 | WSW | W | Clo. | | Rain |
| 1 | | 69 | 78 | 82 | 30 | 04 | 30 | 05 | 70 | 68 | SW | SW | | | Fair |
| 2 | | 76 | 80 | 65 | 30 | 09 | 30 | 12 | 61 | 58 | WNW | SW | Fine | | Fine |
| 3 | | 75 | 83 | 63 | 30 | 10 | 30 | 05 | 62 | 63 | SE | E | | | |
| 4 | | 70 | 82 | 67 | 29 | 95 | 29 | 84 | 63 | 69 | SSE | E | | | |
| 5 | | 80 | 82 | 65 | 29 | 75 | 29 | 77 | 60 | 64 | SSW | SW | | | Clo. |
| 6 | | 73 | 81 | 68 | 29 | 80 | 29 | 75 | 70 | 63 | W | WSW | Clo. | | Fine |
| 7 | | 79 | 82 | 65 | 29 | 69 | 29 | 64 | 65 | 66 | W | SSW | Fine | | |
| 8 | 8, | 74 | 81 | 67 | 29 | 58 | 29 | 58 | 65 | 73 | S | WSW | | | Rain |
| 9 | | 75 | 80 | 64 | 29 | 57 | 29 | 60 | 69 | 60 | SSW | W | Fair | | Fine |
| 10 | | 73 | 78 | 61 | 29 | 65 | 29 | 72 | 61 | 61 | WSW | W | | | Fair |
| 11 | | 65 | 75 | 62 | 29 | 74 | 29 | 81 | 63 | 63 | WSW | WNW | | | |
| 12 | | 65 | 76 | 65 | 29 | 76 | 29 | 66 | 70 | 72 | WNW | SW | sRain | Fair | Fine |
| 13 | 11, | 70 | 72 | 59 | 29 | 55 | 29 | 55 | 72 | 83 | WSW v | SW | Fair | Rain | |
| 14 | | 65 | 75 | 52 | 29 | 62 | 29 | 72 | 72 | 60 | W | SW | | Fair | |
| 15 | | 69 | 74 | 59 | 29 | 74 | 29 | 75 | 65 | 61 | SW | WSW | Fine | | Rain |
| 16 | 5, | 65 | 70 | 55 | 29 | 66 | 29 | 75 | 75 | 62 | SW | WNW | Rain | | Fair |
| 17 | | 65 | 73 | 59 | 29 | 83 | 29 | 83 | 62 | 63 | N | WSW | Fine | Fine | |
| 18 | | 70 | 73 | 61 | 29 | 82 | 29 | 78 | 59 | 63 | WNW | W | | | |
| 19 | | 67 | 73 | 59 | 29 | 78 | 29 | 90 | 65 | 58 | WNW | WNW | | | |

The quantity of rain fallen in the month of June was .62 inch.

NOTICES TO CORRESPONDENTS.

THE READERS of the METEOROLOGICAL JOURNAL may perceive, from this Number, that it is our intention to extend our monthly limits to at least six whole sheets, or 96 pages, and to print the greater part of the work in a closer and more uniform type than formerly, which will be equal to a still farther extension of the limits of the work.

Several Communications are received, and are under consideration.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

Correspondents, and authors of works, or of papers in other Journals, who may wish to have their productions noticed, may send them under cover (post paid) to the Editors, 1 Bulstrode Street, Cavendish Square, or to the Publishers, Fleet Street.

The Index to the preceding Volume will be delivered with the next Number.

Communications, and Works for Review, are requested to be addressed (post-paid) to the EDITORS, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 153.

SEPTEMBER 1, 1826.

VOL. XXVI.

No. XV.—NEW SERIES.—VOL. III.

PART I. REVIEW.

I.

OF VENOUS CIRCULATION AND ABSORPTION.

Experimental Researches on the Influence exercised by Atmospheric Pressure upon the Progression of the Blood in the Veins, upon that Function called Absorption, and upon the Prevention and Cure of the Symptoms caused by the Bites of Rabid or Venomous Animals. By DAVID BARRY, M.D.
Pp. 175.

It has been for some time known to the physiological world that Dr. Barry had made some important experiments on the venous circulation, an account of which he had read at the Institute of France. The Baron Cuvier and Dumeril were appointed to report upon the memoir, and the very favourable opinion they passed, naturally added to the interest that under any circumstances the subject would have possessed. The publication of the memoirs in English at length affords us an opportunity of laying before our readers a more detailed account than we have yet been able to do of the nature and extent of these experiments; and we are much mistaken if they will not more than equal any expectations they may have formed. They are in our mind by far the most important and philosophical experiments that have been made for the last twenty years; and, while they explain most satisfactorily some of the obscurest phenomena of venous circulation, they add a most valuable means to the treatment of poisoned wounds. But while we are and must be gratified, that for such an advancement of physiology and surgery, we are indebted to a countryman of our own, we are not less gratified at the liberality with which he was received, and his investigations facilitated by the ablest men in Paris. In

VOL. III. NO. 15.—NEW SERIES.

2 B

the anxiety to advantage science, these illustrious individuals forgot all national considerations, and afforded another proof, if another were yet wanting, that the underlings of science alone are they who would disfigure the domains of philosophy by the heart burnings of envy, or of political animosity. MM. Cuvier, Laennec, Cruvelhier, Billery, Breschet, &c., and M. Girard, director of the veterinary school at Alfort, actively forwarded his investigations; nor does any thing seem to have been withheld which could tend to elucidate his inquiries. We must agree with Dr. Barry, that this liberality cannot be too highly appreciated, nor too fully acknowledged.

The motion of the blood through the arteries is very manifestly caused by the heart, and the power of this organ seems sufficient to explain the phenomena of the circulation through these vessels, or at least through the larger branches. But when we come to the progress of the blood back to the heart through the veins, every thing is obscure. That the blood does flow in this course is plain; but all the explanations that have been given of the manner in which it is effected, have either been insufficient to explain all the phenomena, or they have rested upon theoretical speculations that have never been proved. The force of the contraction of the heart has been supposed to continue to the veins, yet so obscure at the best is its communication, that some physiologists have altogether questioned its existence. The insensible contraction of the extreme arteries, and the contractile power of the veins themselves, are gratuitous assumptions altogether independent of proof, and only entertained even for a moment because no other power of propelling the blood towards the heart was manifest. The pressure of muscles are certainly aiding to the venous circulation, but yet utterly insufficient to establish, or solely to support it. We cannot, however, agree with Dr. Barry, that the heart itself has no active power of dilatation, for many circumstances tend to prove the contrary; and the fact that the heart will continue to dilate and contract when it is perfectly empty, seems utterly inconsistent with an entire absence of the power of suction in the organ. Of the value of Dr. Carson's opinions, Dr. Barry does not speak decidedly; and it must be confessed, that the really active resiliency of the lungs has not been proved. All we know, indeed, seems to demonstrate that they are passive in the mechanical part of respiration, and that they follow the parietes of the cavities in which they are contained. Thus, therefore, were we left without any certain knowledge of the powers by which the venous blood is propelled. Dr. Barry, after mentioning the above circumstances, states the manner in which he was led to his investigations.

‘ It seemed to me, however, impossible that the alternate expansion and contraction of the thoracic cavities should not affect the great veins opening into them in the same manner as the expansion of a pair of bellows would the contents of flexible tubes in communication with their cavities. I reasoned thus:—

‘ The right and left cavities of the thorax have within them each a lung or bag, divided into a greater or lesser number of distensible cells, communicating with one another, and with a common tube, the trachea. When the chest is enlarged by the act of inspiration, air rushes in through this tube to distend the air cells, and force them to occupy that space, in which the expanding sides of the thorax tend to leave a vacuum. But as it is evident that the air would follow the expanding sides of the chest much more readily if there were no cells to be distended; and as it is an unalterable law that all liquids in communication with an enlarging cavity, will be pressed towards it, if exposed at the same time to atmospheric influence; it became presumable that blood would be forced into the thorax through the cavæ during inspiration.’

To this view of the subject, many phenomena that had hitherto puzzled physiologists came in aid, as ‘ the swelling of the external veins during expiration, and their immediate collapse upon inspiration,’ &c.; and ‘ the absorption of air by the veins,’ a fatal instance of which was recorded in many of the French journals last year, and from them copied into our own; and also the cessation of certain hæmorrhages by means of forced inspirations. For this, also, Dr. Barry adds considerations from anatomy, and conceives the organs of respiration and circulation in the chest both to be similarly circumstanced, and each resembling a pair of bellows. That this is true of the lungs is well known, and our author endeavours, and, as it appears to us successfully, to demonstrate that it holds equally good of the heart and pericardium. For the attachments of this bag are such, that when the lungs are fully dilated, the portion of the pleuræ ‘ covering the pericardium on either side is pulled upon at its margins on both sides, in the directions best calculated not only to protect the fibrous bag from pressure, but to enlarge its cavity throughout.’ He then proceeds to shew the exact mode in which the expansion of the pericardium, and consequently of the heart, takes place during inspiration, in which, however, we shall not follow him, because our intention is rather to give a general outline of these researches than unfairly to comprehend the whole matter of the volume in our Journal. The necessary consequence of this expansion is a tendency to form a vacuum within the chest, and hence, as above observed, ‘ all liquids in communication with the interior of the thorax must be attracted thither, being forced towards it by atmospheric pressure.’

Having upon these facts, and this train of reasoning, formed his conclusions, he proceeded to prove, by direct experiment, that a vacuum actually is formed, or at least that there is a tendency to form it, during inspiration. 'Having fixed,' says the report of the Commissioners appointed by the Institute, 'into one of the great veins, such as the jugular of a living animal, one end of a tube armed with a stop cock, whilst the other end was plunged in a coloured liquid, he observed, upon opening the stop cock, that when the animal inspired the liquid was forcibly drawn up; and that during expiration, on the contrary, the liquid remained stationary, if it did not return towards the vessel. We are able to announce, moreover, to the Academy, that whenever the experimenter introduced the same tube, which was contrived with much ingenuity, into either of the thoracic cavities, or even into the pericardium, the same phenomena were observed.'

MM. Cuvier and Dumeril, after relating the above experiments, state them to have been made with such precautions as to obviate every objection that might be opposed to them; and they consider that Dr. Barry has fully proved his opinion, that the blood is drawn by suction towards the chest, precisely at the instant when the animal endeavours to form a vacuum in that cavity; 'that the black blood passed through the veins only during the act and the time of inspiration; and that this venous movement was always placed under the influence of the action of atmospheric pressure.'

From a consideration of the anatomical structure of the pericardium, and the manner in which the pulmonary veins enter the left auricle, Dr. Barry has inferred that the lesser circulation is also under the influence of atmospheric pressure. He has also made the assertion that 'it is perhaps the only part of the animal which is never found entirely wanting.' We are not inclined to contest this matter ourselves, though we are certainly inclined to believe those accounts which represent it as deficient in one or two cases; but it is at least true, that union so intimate has existed as to lead to the supposition of its absence, and this must, in a physiological point of view, have precisely the same consequences. The Commissioners observe, 'that some facts of comparative anatomy might be successfully opposed to this opinion, which the author has not brought forward with such conclusive experiments as those upon which he has based his demonstration of the action of atmospheric pressure upon the greater venous circulation.'

The velocity of the blood in the veins, Dr. Barry deduces from the number of inspirations, which alone regulate it, and

not the pulsations of the heart. Upon this part, however, the Commissioners decline to give any opinion, considering it not to be supported by proofs and observations sufficient to enable them to do so.

We shall conclude our account of the first memoir with the following quotation from the report of the Commissioners, referring our readers for farther particulars of these researches to the work itself, which they cannot neglect without injury to themselves.

‘ Your Commissioners consider these researches as made in the very best spirit, and as eminently calculated to elucidate the physiological history of the venous circulation in the mammalia.

‘ They must not, however, conceal, that in their particular opinion, the act of inspiration, which appears to produce a vacuum within the thoracic cavities of animals having lungs, such as the mammalia, and, consequently, the attraction of the venous blood towards these cavities, is not sufficient to explain the motion of the blood in the veins of fishes, and of some reptiles, in which the mode of respiration is different; the same coincidence of action not being observed between inspiration (which in these animals is a species of deglutition) and the arrival of the venous blood at the cavity of their hearts.’

The second memoir is upon the subject of absorption, and commences with an historical survey of the manner of treating poisoned wounds at different periods. It exhibits not a little of curious information, and particularly demonstrates the necessity of accompanying correct practice with correct theory, to give it any chance of general and permanent adoption. Dr. Barry, considering absorption to be the result of atmospheric pressure, and that the lymph and chyle must be drawn towards the chest through the direct communications which the vessels peculiar to these fluids have with the subclavian and other veins, discusses whether absorption can, strictly speaking, be called a vital function. Gravitation and pressure, he observes, act under all circumstances, and their influence is never for an instant suspended, either with regard to inert or living matter. In inert matter, motion makes them know in their full force, but living matter modifies these two properties ‘ according to the organisation peculiar to its mode of existence.’ Thus, if a liquid be caused to flow through a compressible tube, pressure and gravitation may be made to affect it, either as they operate in the same direction, or are made to oppose each other, and then according as the quantity of the one exceeds the quantity of the other. But to modify them, a third power must intervene, and it is this power of modifying these two great agents *by its own action* that distinguishes organised matter,

the resulting phenomena depending, in fact, upon the pressure and gravitation. 'Thus, the word *absorption*, representing, in the language of physiology, the transport of matter from the surface to the centre of a living animal, must be admitted with the same limitations as the word *suction*, conveying, in the language of physics, the idea of a liquid forced by atmospheric pressure into a cavity, where, by expansion, or otherwise, a tendency to a relative vacuum had been established. * * * Absorption, then, as exercised by living animals in its physical acceptation, and with reference to matter external to these animals, is the transport of that matter from their surface towards the centre.'

Pursuing, then, the subject in this manner, Dr. Barry infers that the ascent of the liquid in the experiments above referred to, was, in fact, absorption; and in order to prove it, he instituted fresh experiments, which appear to us perfectly conclusive. This is his own account of these experiments:—

'To prove the truth or error of this induction, I procured different kinds of poison, the fatal activity of which had been well ascertained; such as prussic acid concentrated, pure strychnine, upas tiénté, white oxyde of arsenic, &c. I satisfied myself, by repeated trials, that six drops of the acid introduced into the cellular tissue of the thigh of an adult rabbit, would kill him in two minutes; that a grain of pure strychnine deposited in a recent wound of the same animal will produce death in from five to seven minutes, and that a grain of upas tiénté will destroy him in ten or twelve minutes.

'I experimented with these and other poisons upon rabbits and dogs, having almost always two animals placed under exactly the same circumstances, except that the piston cupping-glass was applied to one, whilst the other was abandoned to his fate. The animal abandoned invariably perished within the periods stated. The animal to which the vacuum was applied never shewed the slightest symptom of poisoning, although the deleterious matter remained in contact with the wounded surface during the space of an hour, two hours, and even so long as five hours consecutively.

'When the poison was conveyed by means of a tube under the integuments to some distance from the opening by which it had been introduced, if the cupping-glass was applied to the sound skin corresponding to the spot where the poison had been deposited, (the wound being without the bounds of the vacuum), not only was there no indication that any portion of the poison had been absorbed during the application of the glass, but even after it was taken off, the animal continued for one or even two hours to carry embedded in his cellular tissue a dose which would infallibly have destroyed him in a few minutes had the cupping-glass not been previously applied.

'In these cases, when I waited for the appearance of the tetanic convulsions, the reapplication of the glass immediately suspended them, and the removal of the poison, through an incision in the

integuments, saved the animals. When I applied the cupping-glass over the opening made in the integuments for the purpose of introducing the tubes leaving the poison under the skin, outside the bounds of the vacuum, no absorption took place during half or three quarters of an hour, but as soon as the glass was removed absorption began.

‘If, during the application of the glass, I made an incision between its edge and the point where the poison was placed under the integuments, absorption went on as if no vacuum were applied.’

In proof of these positions, Dr. Barry has related the particulars of twenty-five experiments, for which we shall refer to the work itself. Suffice it to say, however, that they fully establish the efficacy of the cupping-glasses in preventing the evil effects of traumatic poisoning. He has also given directions for the application of the foregoing principles in the treatment of poisoned wounds.

‘In all cases of superficial poisoning, when the deleterious matter is simply deposited in the wound, the application of the cupping-glass over the point of contact will save the individual, provided it be made with the precautions to be noticed hereafter, and before a dose sufficient to cause death shall have been absorbed.

‘In cases where the poison has been injected, as, for instance, by the hollow fang of a viper or rattle-snake, though the cupping-glass may have been applied; yet as the local action of the venom goes on in vacuo, the parts acted upon should be cut out after the venom has been concentrated, and partly extracted by the cupping-glass, which should be immediately reapplied over the wound made by the knife, for the purpose of extracting the contents of the newly-divided vessels from a greater distance than could be done before the operation. After this the actual cautery may be administered, if thought necessary; but never, under any circumstances, before the second application of the cupping-glass, for this reason — that when the mouths of the vessels are hermetically sealed by the hot iron, they can give out nothing to the vacuum.

‘The poisoning that results from the bite of a mad dog, so far as regards the simple deposition of the deleterious matter in the wound, and the total absence of local action upon the wounded tissues, come strictly under the first, or least complicated class of cases. But the tardiness with which the poison is absorbed, or if absorbed with which it produces its peculiar effects, entitles it to be considered as a species *sui generis*.’

The precautions alluded to in the first paragraph are comprised in the following directions for treating an individual who has been bitten by a mad dog.

The cupping-glass is to be applied first of all, and after an hour, during the whole of which time the cupping-glass is to be left on the wound, ‘the whole of the parts wounded or abraded by the bite should be freely dissected; the cupping-

glass should then be reapplied immediately, for the reasons already stated. The wound should next be hermetically sealed by the actual cautery. The part should be as little exposed to the contact of the air after the slough comes away, and as soon healed as possible.'

With respect to hydrophobia, Dr. Barry is inclined to believe, that fatal absorption only commences when pain is felt in the wound, extending towards the thorax; and that at this time consequently the cupping-glass ought to be applied, and the other measures above mentioned pursued. Even the actual presence of hydrophobic symptoms ought not to deter us from this proceeding.

Such is a very brief analysis of these researches, than which no contributions more important have for many years been made to physiology. Experiment upon living animals has here its legitimate direction; there is neither needless cruelty, nor ill-conceived deductions,—but while the experiments themselves are honourable to the intellect of their institutor himself, they promise in their consequence to be beneficial to the whole human race.

II.

OF HEADACHES.

An Essay on Headaches, and on their Cure. By WALTER VAUGHAN, M.D., of the Royal College of Physicians in London. London, 1825. 8vo. Pp. 252.

IT appears to us that this book is a particularly good example of that style of writing which we know not how better to distinguish than by the epithet *expansive*; and by which we mean a style precisely opposite to that which is characterised by brevity and terseness. There is scarcely a page, from beginning to end, which will not afford the reader an illustration of this; and we question if there be in modern medical literature a more remarkable collection of sundry observations and quotations than is contained in this *Essay on Headaches, and their Cure*. On this account, a review of it will be very useful to the reader, it being exactly, as it appears to us, the kind of book which may very advantageously be read 'by deputy.' It is not ill written, nor is the various matter with which the pages are enlivened at all uninteresting: it abounds, on the contrary, with pleasant learning, and much idle and agreeable reading; but most men have something to do in the world, and few have time to read works of this nature through. With a resolution, therefore, to care little about Sauvages, to pay small atten-

tion to Hippocrates, or Celsus, or Aretæus, or Galen, or Thucydides, or Dionysius Halicarnassus, or the Abbé Condillac, or Horace, or Persius, or Virgil, or Lord Bacon, or Sir Isaac Newton, or Themistius, or Treviranus,—we shall restrain ourselves in the strictest possible manner to headach, and headach only; advertising the reader, that if he would see much mention of these, and many other authorities on all subjects connected either with the inside or the outside of the head, he will find Dr. Vaughan's book worth many times the price at which it is published.

As the word headach has, in the author's opinion, been in some instances vaguely and improperly employed, we shall allow him to give his own definition of it.

'I shall tell, first, what I think a headach is, and shall next shew what is not a headach.

'I purpose, then, to confine the word headach to every disagreeable sensation which the patient refers either to the inside, or to the outside of his head, provided that the disagreeable sensation be so increased by the exercise of his intellectual powers, that he is alarmed, reserved, and shrinking from the impression of internal objects, his pulse and his respiration being not more frequent than in health; but his temperature, that of his extremities especially, being more or less diminished. This conjunction of symptoms is, I believe, established by nature; for it has at all times, and in all places, been found in different individuals.'—P. 31.

We must inform the reader that when Dr. Vaughan comes to speak of what is *not* a headach, he excludes pain of the scalp from any claim to that title; wherefore, we profess not to know: we acknowledge that the integuments of the head are not the head itself; but surely this is to reason too deeply for the occasion, and to employ a kind of logic which leads to absurdity. The integuments are not the head, therefore pain in them is not headach: the bones of the cranium are not the head: the membranes of the brain are not the head: the brain itself is not the head: therefore man has no head; and there can be no such thing as headach at all; and Dr. Vaughan's book is about a thing non-existent. We fairly confess our inability to recognise any distinct and familiar disease in the above definition, or even in any thing contained in the chapter on the 'symptoms of headach,' in which we see nothing but a learned and ingenious, but, as it appears to us, objectless commentary on a definition of Celsus. This part of the work has been published at least a century too late: it treats largely, and in a scholarlike manner doubtless, of almost all things in heaven and earth; but the subjects are so strung together, that the reader is fatigued without

being instructed by the perusal. Lest it should be supposed that we are unnecessarily critical, we shall insert an extract from this commentary.

‘*Vox supprimitur*.—Does Celsus mean that a patient with cephalæa will not speak, that he is silent by intention, or that he cannot speak? A loss of voice in cephalæa presupposes sometimes pressure or disorganisation at the origin of the eighth pair of nerves, as it does in apoplexy likewise, the recurrent branches of those nerves being the true vocal organs. Galen knew a loss of voice from opium introduced into the ear to cure a pain of it. Stramonium infused in wine, belladonna, and hyoscyamus, have all produced aphonia. Soëmmering, Scarpa, and Portal, all of them attribute the loss of voice, occasioned by the ingurgitation of inebriating liquors, to the pressure of the distended vertebral arteries on the ninth pair of nerves; but this loss of voice generally ceases as soon as the subject of it has recovered from his drunkenness, although Portal has known it not to cease then.

‘But if the recurrent nerves, or the par vagum, be divided in the neck on both sides, the voice is lost: it has, therefore, been lost by the removal of tumours from the neck, by luxations of the arytenoid cartilages, &c.

‘When the voice is lost from a disease of the brain, it is a dangerous symptom; as it is also when it is lost from debility. It may be lost when there is no sign of plethora, and no reason to suppose any pressure with the cranium, from spasmodic affections of the larynx, and from affections of very distant parts, by sympathy, or by causes that prevent the full dilatation of the lungs. Thus hysteria, epilepsy, and gastric and nerminous diseases, are often attended with a loss of voice. Aphonia during pregnancy is generally cured by parturition.

‘Difficult menstruation is sometimes attended with a loss of voice, which is perhaps owing to some affection of the ovaria. Every one knows the change of voice at the period of puberty; and that some birds whistle during the pairing season only, when their testes are enlarged, although in winter they are shrunken to almost nothing. And every one may have heard of the occasional swelling of the testes when the glands of the neck are swollen, in cynanche parotidea, or mumps. Hysterical women are very subject to loss of voice; and in most cases of hysteria the ovaria are said to be diseased.

‘Tulpius tells us of a Brabant merchant, who was every spring so shockingly tormented with a headach, that he could scarcely open his eyes, or speak a word, although loquacious and turbulent at other times. Was his voice voluntarily suspended? This is uncertain. Was his voice suspended by consequence of a violent effort to relieve his pain? I do not think so. If history abounds in examples of spasmodic affections, originating in violent voluntary exertions to relieve pain in headach, the patient makes no voluntary exertions.’—P. 88.

We know not how this passage may affect others, but the perusal of a succession of such, chained together as notes on 'honor validus,' 'mentis alienatio,' 'sanguinis ex naribus cursus,' &c., has, in ourselves, actually the effect of producing confusion almost amounting to vertigo; and, even if we did now and then fancy we understood what the author meant to write about, the illusion was wholly destroyed at page 74, where he says he never saw an instance of *cephalæa* without *palsy*. The title of the next chapter promises something more intelligible, but is read with disappointment. It is evident, that although the author is a man of great reading and acquirement, his ideas are associated with a rapidity that may truly be called morbid; and when we have read all that is said of the kinds of headach, we profess to be unable to assert, with any kind of confidence, that the author admits any kind of headach at all: but the subject is again taken up in a subsequent part of the work.

In speaking of the predisponent causes of headach, we are involved in a labyrinth of logical sentences on the causes predisponent, the causes procatactic (we cannot *write* this word without difficulty), and the causes *of* the predisponent cause; from all which we learn, as Polonius observes, merely that 'this effect defective comes from cause.' And all this concludes with the following conclusion:—

'The actual presence of headach is not always necessary to convince us of the existence of its predisponent cause; but there are two signs, by either of which we may sometimes, and by both of which we may always, be convinced of its existence: the one is an imbecility in the head—the other is a mis-shapen head.'—P. 102.

Still following Celsus (lib. i. c. 4), Dr. Vaughan signifies by imbecility in the head a constitution characterised by frequent and transient disorders of sight, hearing, smelling, or tasting, and a disagreeable feeling, not amounting to pain, in the head itself, and easily induced by slight exertion. As regards the influence of a mis-shapen head in predisposing to headach, he refers to Morgagni for several examples. There is a connexion, he thinks, between a 'less frequent systole of the heart and headach,' children not being very liable to it, and it being more common 'from about forty-five years of age, when the pulse becomes gradually slower, to about sixty, after which the pulse begins again to be more frequent.' Particular diseases may leave a predisposition to headach, especially fevers, inflammation within the head, scrofula, syphilis, &c., and each of these is spoken of in the work before us, after the peculiar manner of the author, with every subject incidental to, or in the remotest degree connected

with all; drunkenness, opium, insanity, tubercles in the lungs, caries of the cranium, mercury, syphilis in infants, hypertrophy of the brain, &c. &c.; and, at the conclusion of the chapter, the subject of the *division* of headaches is thus resumed and dismissed.

‘And now to return to the division of headaches as I promised. I presume that the reader has clearly seen that there are two kinds of headach, essentially different from each other; one, in which every succeeding paroxysm is not more violent than the preceding, but is generally less so; and another, in which every succeeding paroxysm is more violent than the preceding: that the former headach is not excited on all extraordinary occasions, but on some only; but that the latter is, more or less, excited on all extraordinary occasions, and, therefore, that in the former there is a disposition to discontinue a morbid action; but that in the latter, the vis medicatrix naturæ is surpassed by the predisposition, which increases even in the intervals of the paroxysms. The former headach I shall call cephalalgia, the latter cephalæa.’—P. 125.

It is with regret that we find ourselves unable to speak more favourably of the next chapter, on the occasional causes of headach, in which we labour through pages, consisting for the most part of the most palpable truisms on the subject of the sensations, the attention, the passions, heat, cold, &c. &c., merely diversified now and then with errors which it is worth nobody’s while to rectify. We are told, with all the dignity of apothegm, that we cannot see with our ears, or hear with our eyes; that we have five senses; that the light of the sun is blue, and the light of a candle yellow; that the stars disappear before the sun; that ‘the fragrance of a nosegay does *not* lead us to a knowledge of all the odoriferous flowers composing it;’ that an ignited stick, quickly whirled round, gives the idea of riband; with many other things equally new in metaphysics and pathology, extended over many pages. On the subject of headach arising from study, it is satisfactory to read the following opinion:—

‘I believe a headach is never the consequence of the formation of general principles; the characteristic properties of things, when once the things have been fairly examined, arising spontaneously in the mind by a kind of reminiscence, which, Themistius says, is always most perfect in the most ingenious minds.’—P. 135.

If it was not remote from our duty in these pages, we should really like to engage in a little controversy on some of these matters, as on early education, the mind of man as distinguished from that of brutes, and the state of the faculties in insanity; but if we were to speak of these things suf-

Sciently at length to correct what we conceive to be erroneous in the author's opinions, we should but travel further from the subject of headach than he has done. We prefer reading on to the 186th page, from which we shall make an extract containing more of a practical nature than any we have hitherto met with.

'The headaches referred to the stomach, which I shall notice, are independent of any organic disease, as scirrhus, cancer, stricture, &c. Indeed, I am not certain that organic diseases of the stomach ever excite a headach.

'The first headach is that from over-distension of the stomach, in a person in good health. Even a sort of apoplexy is sometimes incurred at a venison or a turtle feast. The stomach has been found extending into the left iliac region, and filling almost the whole of the cavity of the abdomen; and from the pressure of the stomach on the aorta in the epigastric region, more blood must have been sent towards the head, and less into the extremities. In the headach, however, and in the apoplexy from a distended stomach, the blood is decarbonated in the lungs, to keep up the action of the heart; but the lungs cannot be duly expanded, because the descent of the diaphragm is prevented: hence there is an accumulation of blood on the right side of the heart.

'I have already remarked, that irritation of the stomach may disorder respiration, as if the lungs themselves were injured; and if the lungs be already disordered, their disorder may be aggravated by the state of the stomach.

'If one exert himself by running, or even by walking after a meal, he feels his breathing oppressed, because his digestion is interrupted, and the capacity of his chest is diminished.

'The second headach is occasioned by hunger in a healthy person, as when he abstains from food beyond his usual hour of dining. This headach may almost instantly be removed by a morsel of meat, for this, as soon as swallowed, communicates a vigour to the whole system, and does it by its mere contact with the stomach; therefore before chyle can be formed of it, before chyme can be formed of it, nay, and before any additional quantity of blood can be determined to the stomach. A glass of wine does the same as a morsel of meat; so does tea, coffee, and opium, which diminish the accumulated excitability of the stomach.

'The third headach is that which is traced to a naturally weak stomach when empty. It is noticed by Celsus, who says that a weak stomach is indicated by paleness, emaciation, pain at the præcordia, nausea, involuntary vomiting, and pain in the head when the stomach is empty. He mentions, also, as indicating weakness of the stomach, a distension of it by flatus, with frequent discharges of it upwards and downwards, acidity of the mouth, and thirst at bedtime from some heat. It is plain, that these symptoms denote morbid secretions in the stomach, for the acid and the air are both such.

‘To the removal of that state of the stomach which is productive of this headach, I have found nothing more conducive than warm clothing, and keeping the bowels soluble. Warmth is best kept up by a covering of flannel; and activity of the bowels by dejections at regular hours every day. As, however, the bowels are generally costive when there is acidity in the mouth, sulphate of magnesia, together with magnesia in simple mint-water, taken every morning, I have found most beneficial. Mercurials I have never tried. Spontaneous vomiting is always followed by relief; but vomiting procured by emetics never: nor is the relief in the former case of long duration. The best diet is the simplest and plainest, taken often, but in small quantities.

‘There is a fourth headach, to which the chlorotic and the hypochondriac are peculiarly liable, which comes on with a pain of the stomach, not immediately after taking food, but, as it should seem, as soon as digestion begins; for the pain is not felt till the food has been swallowed for some time, but is increased till the food, which is little altered, is brought up. If no food be taken, no pain is felt in the stomach, and no headach, which leads some to abstain too long from eating, so that when they are obliged to eat, the pain in the stomach and in the head seem to be the greater the longer they may have fasted.

‘As pain may be communicated from branches of nerves to their trunk, as well as from the trunk to its branches, and as palsy from irritation may take place, as well above it as below it, I suspect that this headach, and perhaps all resembling it, arises from irritation of the stomach communicating an impression to the brain by the eighth pair of nerves.

‘Small doses of opium taken a little before dinner render the pain of the stomach more tolerable, if they do not prevent it.

‘The bowels should be kept soluble by gentle laxatives, hydrargyri submuriæ may be given at bedtime, and a saline purgative the next morning twice a week. And during the pain, carbonate of ammonia, spiritus ætheris aromaticus, spiritus ætheris sulphurici compositus, opium, camphor, castor, assafoetida, or mosch, may be occasionally given; but the disease of the stomach and of the constitution are best removed by the *mistura ferri composita*; and a blister should be applied to the epigastric region, or to the back.

‘The best diet is meat, with less vegetables than usual; but less of every thing should be taken at a time.

‘I have never found meat broths agree with a weak stomach, although I have sometimes found it difficult to convince a patient that a fluid state of food is unfavourable to its digestion. I think that broiled meat is better than either roasted or boiled.

‘As for a beverage at meals, for the patient should not distend his stomach with fluids,—pure water is the best, and fermented liquors are the worst.

‘The patient should sometimes before dinner walk abroad, and sometimes ride on horseback, or, if it rain, in a carriage; and his

exercise in the open air should not be omitted for a day, but should never be such as to bring on fatigue.

'Analogous to this headach is that of persons of what is called a nervous habit, subject to flatulency, making large quantities of pale urine, and occasionally distressed by feelings of sinking and dying. When these persons are recovering from any constitutional, or from any local disease, have suffered any accident, as a compound fracture, or have undergone any surgical operation, they are for some time afterwards liable to be seized with a cold shivering, attended with a sense of dying, and followed by a cold sweat. The headach is best subdued by camphor, valerian, opium, &c.; the irritable state of the stomach and constitution by Peruvian bark, and preparations of iron; and the feelings of sinking and dying by brandy.

'A fifth headach is that from which the very young are always, and the very old would always be exempt if they had not habitually loaded their stomach with improper food, and from time to time suspended its functions by large and repeated draughts of alcohol in some manner diluted, as in brandy, rum, wine, &c., all which act on the brain, as well as on the stomach, and bring on disorder of the chylopoietic organs. Patients labouring under this headach have no appetite for ordinary food, and therefore seek for condiments; and often from taking ginger in a morning, they fly to tinctures from the apothecaries, and then to drams: not aware that every thing which suspends the action of the stomach, and the digestion of food, gives rise to flatulence, they flatter themselves that the escape of it, which they cannot prevent, is the salutary effect of spices and spirits, and therefore take them oftener, and in larger quantity, till their tongue becomes foul, their urine turbid, their bowels costive, their fæces of an unnatural colour, consistence, and odour, their epigastrium tender on pressure, and their complexion totally changed. These dyspeptic symptoms, which are often kept up by local irritation of some part, are largely treated of by Mr. Abernethy, whose observations are in every one's hands.

'Headach does not always attend these symptoms of indigestion; when it does, the cure of the headach is the cure of the symptoms. Indeed, the sick headach of Dr. Fothergill, as it is commonly called, seems to me to be no other than this, arising from the incipient state of the symptoms which I have mentioned.'—P. 186.

We can quote no further, although we leave a sixth headach, proceeding from the stomach, unmentioned, namely, that which depends on the presence of worms in that viscus. Dr. Vaughan does not, it will be observed, agree with Dr. Parry concerning the pathology of sick headach: he admits, that it may be accompanied by an increased action of the carotids, but has always seen it preceded by immoderate indulgence in food; nor has he known it cured by spontaneous bleeding from the nose, but has often known it

relieved by magnesia, alkalies, particularly carbonate of ammonia, and cured by vomiting. The complete cure of this affection of course depends on the removal of the disordered state of the stomach on which it depends, which is to be attempted by laxatives, bitters, and a regulated diet. In the author's remarks on headaches arising from disordered states of the duodenum, we find nothing which has not previously been noticed by Dr. Yeats: he confirms the observation of Mr. White, that diseases of the rectum are generally productive of pain in the occiput.

From the concluding chapter of Dr. Vaughan's book we shall make no extracts, as we find nothing really practical that is not already known to all our readers; and we do not wish again to revert to the want of order, brevity, clearness, and precision, of which it may be thought, in this age of complimentary criticism, that we have already spoken more harshly than we ought. If, instead of two hundred and fifty pages, the work had been condensed into less than half that number, by the separate and abridged publication of the last two chapters, it would have passed without censure, and perhaps almost without notice. In its present shape it will not have many readers, nor can it much be recommended as a work of reference. The subject of headaches is doubtless difficult and perplexing, and the work before us has, in our own opinion, a tendency to make 'confusion worse confounded.' The office of any one who presumes to present the public with criticisms is not always of a nature to be discharged with comfort: we have ourselves endeavoured, during our short and by no means pleasing trial of the suitability of our fitness for the office, to act honestly and without partiality; and we have more than once observed with disgust, that the most flimsy publications, in which every thing commonplace was expressed in a style disgraceful to the literary character of the profession, have in other quarters been held up as 'valuable monographs,' and likely to have a 'beneficial influence;' and we know not what besides. It is this contemptible flattery which has lowered medical criticism (which was needless) even below the general criticism of the day, and led to our being afflicted with such a deluge of essays, treatises, and practical observations, as threatens to destroy all the common sense of the medical world. Of the vanity of authorship and of criticism also, we have long required no conviction; and if we have seemed to have borne our office too cavalierly, we are reminded of the futility of human endeavours, whether made by authors or critics, by hearing, even while

we write, of the death of some of those whose works have come before us.

— ' Say no more: but when God calls, lay aside thy papers; and first dress thy soul, and then dress thy hearse.

III.

OF THE DISEASES OF INFANTS.

[Third Article.]

Instructions to Mothers and Nurses on the Management of Children in Health and in Disease. By JAMES KENNEDY, M.D. London, 1825.

Commentaries on Diseases of the Stomach and Bowels of Children. By ROBLEY DUTGLISSON, M.D. London, 1824.

Practical Observations on the Convulsions of Infants. By JOHN NORTH, Surgeon-Accoucheur. London, 1826.

Commentaries on some of the most Important Diseases of Children. By JOHN CLARKE, Esq., M.D. London, 1815.

An Epitome of the Diseases incident to Children. By WILLIAM HEBERDEN, M.D., F.R.S., etc. London, 1817.

Traité des Maladies des Enfants jusqu'à la Puberté. Par J. CAPURON, Docteur en Médecine, etc. Paris, 1820.

CONVULSIONS.—Convulsions, from their frequency even more than from their fatality, demand more particular notice than most of the diseases of children. They are, however, under every circumstance alarming, and may prove fatal before any disorganisation of the brain has become manifest. It is even possible, that the first attack of convulsion may prove fatal.

Convulsions have been divided into idiopathic and sympathetic: by the former term inferring that they sometimes occur without any manifest cause, and not from affections of the head, exanthematous diseases, or those other maladies which, while they frequently proceed without, are often accompanied by spasmodic contractions of the muscles; by the latter, meaning that they are indicative of other complaints, which being cured, the convulsions will disappear likewise. Idiopathic convulsions are, however, very rare; and more generally we can trace their occurrence to malformation of the heart, the irritation arising from teething, plethoric state of the brain, errors in diet, or the excitement of the passions. From any of these causes convulsions may ensue, and quickly terminate in death. Where they arise from malformation of the heart, they are very little under our control. The only plan we can pursue is to avoid all those

causes which tend to excite an undue action of that organ. In this case they frequently take place immediately after birth, and the child dies within a few days, sometimes within a few minutes from its entrance into the world.

Whenever infants appear peculiarly irritable, we have to fear the occurrence of convulsions. 'The predisposition to this malady,' says Capuron, 'is in proportion to the sensibility and weakness of the child.' That is, the more sensitive and feeble the individual, the more liable to convulsions. This disease, within our experience, scarcely ever comes on without some previous disorder of the constitution. There is often, for a considerable time before the actual paroxysm, evidence of affections of the head, traceable either to actual disease of the brain itself, or sympathetically originating from disorder of the stomach. If the patient is able to speak, we shall find him complaining of frequent pains in the head, very sensible to, and inconvenienced by, the slightest noises, disliking the light, frequently knitting the eyebrows, and preferring perfect rest to his usual active amusements. Sometimes, for a considerable space of time, partial convulsion will exist; there will be 'a propensity to clench the fist,' and very commonly we have seen the thumb forcibly contracted upon the palm of the hand, without any other convulsive symptom. Sometimes, also, squinting is a consequence of partial contraction, without the spasmodic disposition proceeding farther.' 'The natural antagonistic power of the muscles which move the globe of the eye may be destroyed by the contraction of one muscle, and strabisms or squinting will be the consequence.' When, however, there is disposition to general convulsion, the symptoms above enumerated become more marked; the nights are restless, and the constitution is altogether disturbed; the child evinces also symptoms of disorder of the bowels, and the dejections are unnatural both in colour and odour. After this has continued for a longer or shorter time, the paroxysm approaches, the child is feverish, fretful, irritable, yawns much, slight twitches of the muscles are observed, and at length the convulsion is general.

'The most common case,' says Dr. Clarke, 'in childhood, is that in which there is a universal spasmodic contraction of all the voluntary, and many of the involuntary muscles of the body, accompanied by foaming at the mouth, protrusion of the tongue, staring of the eyes, distortion of the eye-balls, laborious and obstructed respiration, sometimes accompanied with a violent redness of the face and scalp in the beginning of the paroxysm, followed by a purple colour of the whole body at the end of it. This latter symptom sometimes continues till the child dies.'

‘ Sometimes, after it has remained a long time without inspiration, a sudden throbbing relieves the impeded circulation, and the blood flows again into its accustomed channels. To the symptoms above enumerated, a state of coma and insensibility generally succeeds, and the child at last falls into a profound sleep, which often lasts for many hours.’

This is very clearly the description of an epileptic paroxysm, and such in strict truth the convulsions of every age may be considered. Mr. North has, indeed, endeavoured to draw some distinction between epilepsy and convulsion, but evidently without thoroughly satisfying himself. Perhaps the only real and apparent distinction is, that that species of general or partial spasm known under the term of convulsion, much more frequently ends fatally than simple epilepsy, which is oftener the cause of fatal disease than fatal itself. Like epilepsy, convulsions are seldom uniform — no two attacks are precisely similar.

Convulsions may endure for very different periods, nor is their danger proportioned to their duration. In some cases, they terminate fatally in a few minutes; in others, they will continue through several hours without any untoward consequence. Generally speaking, however, the danger of convulsions is the direct ratio of their violence, and the weakness of the patient; and consequently they are more to be dreaded in infancy than in later life, and more still as the age of the child is less removed from its birth.

Females are said, by Mr. North, to be more commonly affected by convulsions than males (excepting in early infancy when both sexes seem equally liable), and less seriously affected. We may, however, observe, that when they do occur in the male they are far more violent than in the female.

Convulsions are sometimes epidemic, or, if we employ the language of Mr. North, ‘ from a local cause some epidemic disease has prevailed, of which paroxysms of convulsions were the symptoms.’ The following is a description of a convulsive disease, which the author just quoted has taken from a paper by Gaultier Claubry, ‘ of a very destructive disease which occurred at Paris.’

‘ Twenty-four children perished in one neighbourhood, near Paris, of this malady, which made its attack in the following manner. The little patients were very suddenly attacked with convulsions and loss of sense. The face appeared pale and swollen; the eyes dull; the mouth was quickly filled with a limpid saliva, which freely flowed from it; this fluid was not frothy. The muscles of the face were contracted; the lips were of a livid

colour; the ball of the eye appeared to project from the orbit; the nostrils were distended. The pulse was hardly perceptible; the extremities were rigidly extended; the head was thrown backwards, and remained motionless; urine flowed during the paroxysms; the belly appeared much swollen. Upon the subsidence of the convulsions, the lower jaw became relaxed and fell; the tongue was thrust from the mouth, and appeared lengthened. It was pale and moist, as were also the palate and the interior of the cheeks. The attack was speedily fatal: it generally destroyed within seven hours. This epidemic, which only attacked children below eight years of age, was also observed in dogs under the age of four months. The symptoms under which the dogs laboured were precisely similar to those which appeared in the children. In both cases the breathing was stertorous, as in apoplexy.

The treatment of convulsions must vary with their cause, for though at all times the brain or medulla spinalis are affected, this may happen either from original disease of these structures, or from sympathy with another organ. During the paroxysm, from whatever source it may proceed, we can do very little. Stimulants, such as are usually employed, are without doubt highly dangerous, and are even more likely to aggravate than remove the spasms; nor is it safe to recur to blood-letting at this time. Cold applied to the head, or if the heat of the body should be high, general affusion, may be serviceable; but the latter should be very cautiously practised; since the shock may be even greatly injurious. There are cases, however, where an emetic, if it could be administered, might be beneficial. Mr. North has observed, that 'convulsions which arise from irregularity of diet are generally severe and hazardous;' and an instance was mentioned to us the other day, where a child after having eaten a considerable quantity of raw wheat, had been seized with convulsions for the first time during the night, and died in a few hours. Here, as in the employment of the cold affusion, caution is advisable; and nothing but the completest proof that the stomach has been overloaded will justify the use of emetics. Upon the whole, it will be generally found the best plan to wait quietly till the paroxysm has passed away; and during the intervals to endeavour, by removing the cause, to prevent the recurrence of convulsion.

In the majority of cases in which convulsions occur, there is undoubtedly a determination of blood to the head, and general plethora. In these instances, therefore, bleeding, either by leeches, cupping, or venesection, will be peremptorily required; but bleeding is not applicable to every case of convulsions. They will, and frequently do occur in a state

of extreme debility ; and Mr. North has justly noticed, that ' no convulsions are more violent than those which arise from hæmorrhage, or other debilitating causes.' The discriminating physician will not readily err between these cases, and fortunately convulsions are not very frequently met with as the consequence of exhaustion. Next to bleeding, purgatives are necessary ; and mercurial purgatives are perhaps more serviceable than any others. Where the head is hot, the continued employment of cold, either by ' the application of cold fluids or ice, has been attended with the best effects.' It is, however, only from the *continued* use of this remedy that any good will result ; the partial and imperfect manner in which it is generally employed is rather productive of harm than good. The cold is applied for a few moments, and then removed, and thus becomes actually an excitant of the brain instead of a sedative. In adults, we have frequently witnessed this effect, and have known them object to the application, on the ground that they had always been worse *after it* ; acknowledging, at the same time, that it had relieved them as long as it remained on the head. It should, therefore, be continued to the scalp till all pain has ceased, and till there is no return of the pain upon its removal. This will vary much in individuals, and we have ourselves persisted in its employment for many days together without intermission. The plan we have advised, is to tie a handkerchief over the head as a nightcap, previously dipped in cold water, and keeping it constantly wet, by means of a sponge. This will very frequently prevent the necessity of bleeding, and has the additional recommendation of not weakening the patient. The experience of Mr. North evidently corresponds with our own ; and we gladly insert the following paragraph from his work upon the subject :—

' The best effects may be expected from the proper and assiduous application of cold to the head, where the above symptoms of determination of blood to the brain are present. It is to no purpose that a damp rag, which has perhaps been intentionally warmed by the hands of the over-officious nurse, who is fearful of giving the child cold, should be applied to the forehead ; this is, however, the mode of applying cold which is generally adopted. The whole of the head should be completely wetted with a large sponge soaked in spring water, which should be changed frequently ; or pounded ice put into a large bladder should be applied. If, under the continual application of cold, the child becomes pale, and the head cool, it should be immediately desisted from, and again renewed when the flushing of the cheeks and heat of the head indicate a return of the vascular excitement of the part. It is a common, and I have no doubt a very judicious plan with the French physicians, to

put the little patient into a warm bath while the ice is still applied to the head. In many instances, I believe I have rescued children from a state of great danger by the incessant application of cold to the head, where, if it had been left to the nurse, with the usual passing direction of "keep the head wet," no benefit would have been derived. *Perhaps, indeed, more harm than good is to be expected from the intermitted application of cold, when the symptoms appear to demand its use, as an evident and violent reaction ensues.*

The employment of opiates in convulsions are, without question, always useless, and almost always injurious. They may procure temporary relief, but it is at the sacrifice of the health of the patient. The cause remains untouched, and the convulsions recur and recur again, till a fatal termination has place.

In the administration of purgatives, Mr. North also has given some precautions; but they are equally applicable to every other disease as to convulsions. The action of purgatives is stimulating to the internal tunic of the intestines; and long continued must necessarily tend to weaken the whole frame. The object in their employment ought first to be the removal of the contents of the bowels, which are often the sole source of convulsions; and afterwards to correct the secretions and actions of the intestines, as a means by which we can most readily allay the irritation of the nervous system. After all, however, much, or rather every thing, must be decided according to the peculiar symptoms; and the prudent physician will be aware that the very remedies he administers, incautiously given, may be the excitant of the very disease he is endeavouring to remove.

There is a peculiar species of convulsions in infants, which Dr. Clarke has described, and which has been noticed at length also by Mr. North, that deserves separate attention. It has much resemblance to croup in its access, but in its progress is readily distinguished from that disease.

‘It consists in a peculiar mode of inspiration, which it is difficult accurately to describe.

‘The child, having had no apparent warning, is suddenly seized with a spasmodic inspiration, consisting of distinct attempts to fill the chest, between each of which a squeaking noise is often made; the eyes stare, and the child is evidently in great distress: the face and the extremities, if the paroxysm continues long, become purple; the head is thrown backwards, and the spine is often bent, as in opisthotonos: at length a strong expiration takes place, a fit of crying generally succeeds, and the child, evidently much exhausted, often falls asleep.

‘In one of these attacks, a child sometimes, but not frequently, dies. They very commonly take place after a full meal, and they

often occur immediately upon waking from sleep, though before the time of waking the child had been lying in a most tranquil state. As the breathing is affected by these paroxysms, the complaint is generally referred to the organs of respiration; and it has been sometimes called chronic croup: but it is very different from croup, and is altogether of a convulsive character, arising from the same causes, and is relieved by the same remedies, as other convulsive affections.

Accompanying these symptoms, a bending of the toes downwards, clenching of the fists, and insertion of the thumbs into the palm of the hands, and bending the fingers upon them, is sometimes found, not only during the paroxysm, but at other times.

It seldom happens that this continues long without giving rise to general convulsions.

Mr. North has given a description of the appearances on dissection in the only fatal case he had seen. The brain was highly turgid, and a small quantity of blood was effused under the dura mater in several parts. The only evidence of disease in the abdomen was seated in the liver: its whole substance was firm: upon the upper surface were three white spots, about the size of a sixpence, which felt on passing the scalpel over them like cartilage. During life no symptom of determination of blood to the head had been observed. *'The thumbs were almost constantly and rigidly bent towards the palm of the hand; but they were relaxed after lancing the gums.'*

The treatment of this variety of convulsions nothing differs from the former. It is, however, more frequently an attendant upon difficult dentition, consequently the gums ought always to be examined, and, if necessary, to be thoroughly lanced.

After the immediate and most urgent symptoms have been removed, nothing will tend more completely to establish the health of the patient than a removal to pure air, and a strict attention to diet. On this subject, however, we have spoken more at large in a former paper, to which we must refer our readers for more particular directions.

Marasmus.—This term, which, in its original signification, meant nothing more than emaciation, we now understand as a general expression for infantile fever; and it has by different authors been variously subdivided. It is almost always the consequence of improper diet or regimen, or is a sequela of the exanthematous diseases. It is also attendant upon the common eruptive diseases of infancy, which perhaps are in such cases true contra-irritants, and prevent the more rapid progress of the internal disease. Dissection exhibits very different appearances; nor do we always find,

the principal malady in the mesenteric glands: these are perhaps always affected, but in some instances very inconsiderably. When this happens, there is frequently evidence of inflammatory action of the bowels having had place; coagulable lymph is copiously effused, and the intestines are closely matted together. When the mesenteric glands are principally affected, they are enlarged generally, and in various degrees of softening and suppuration. Occasionally, also, the lungs are involved in this disease; and we have seen them, in a child of six years old, one entire mass of disease, full of tubercles and scrofulous matter. The glands of the neck are frequently swelled at the same time. Incipient tubercles sometimes occupy the liver; but this organ is not often seriously diseased. In some instances there is effusion in the abdomen; in others, even when it has existed during life, it disappears some time before the fatal termination. A tympanitic state of the bowels is common.

Marasmus is very insidious in its commencement, and has generally endured for many weeks before it attracts particular notice. The earliest symptom, perhaps, certainly one of the earliest, is the deranged state of the bowels; they are moved as often, or oftener probably than in health; but the dejections are exceedingly offensive, and unnatural in their colour. The child flushes frequently in the face, particularly after eating; often it is only one cheek that flushes, and the other remains pale and colourless, the skin burns, and the hands especially are hot; the nights are rather restless, and sometimes profuse perspirations accompany even the early stage of the complaint. The appetite of the little patient is for the most part at this time insatiable; he is continually requiring food, and as it serves to allay his fretfulness, which is excessive, food is generally given him, in much greater quantity than while he was in perfect health. He still continues to play about, but is easily fatigued, and withdraws himself at times from his companions to rest himself. During this time, however, emaciation proceeds more or less rapidly, and the abdomen enlarges. Gradually he becomes weaker,—hectic fever is established,—his appetite becomes variable, and at length totally fails. In some cases, however, this remains good to the very last. The bowels are now painful, they become more and more tympanitic, and effusion ensues. A cough, which may perhaps have escaped notice from its slowness, increases, and is particularly troublesome during the night. The child grinds his teeth much, and his nights are very disturbed. Emaciation proceeds rapidly; the patient becomes daily more feeble, and

dies from mere exhaustion. Sometimes, however, another disease is the source of the fatal termination, and pneumonic hydrocephalus, or even acute peritonitis, may be the immediate cause of death.

This is the common course of the disease if left to itself, with some slight variations in the symptoms, as, frequent and painful tenesmus, not rarely mistaken for diarrhœa, griping pains in the bowels, sickness, and vomiting. The child throughout is extremely fretful, and naturally becomes more so as it grows more feeble.

The treatment of this disease in its very early stage is simple, and generally successful; but if it has been permitted to make much progress, every remedy appears useless.

The first indication is that of evacuating the bowels. There is much difference of opinion respecting the mode of effecting this, some practitioners preferring the more drastic purgatives, and others almost confining themselves to the mildest aperients. Much, however, must depend upon the state in which the mucous coat of the intestines may be at the time. Should it be very irritable, and should any reason exist for inducing us to believe that ulceration is present in the tunic, drastic purgatives must be improper. At the same time, nothing is more certain than that the administration of manna and salts is commonly worse than useless; they irritate still more, without relieving the bowels of their contents. In the majority of cases, children of any age will bear well the powder which Mr. Abernethy usually prescribes, consisting of a grain of calomel and five grains of jalap, to be repeated every four hours, till the intestines have been thoroughly relaxed. It will sometimes happen, however, (though not improbably from the adulteration of the jalap), that this powder will exert no operation whatever; or, what is equally inconvenient, the child cannot be made to take it. Some other remedy must be then had recourse to; and we have found that senna and salts are very effectual. Enough cannot, however, be given at once to operate fully, both because it would be difficult to make a child take a sufficient quantity at a single dose, and because if taken, it would very likely be instantly rejected. Under these circumstances, we shall attain our purpose by repeating the medicine in small quantities every hour, according to the age of the patient. For a child under seven years of age, a dessert spoonful will be a full dose; above this age, a table spoonful may be given. This medicine will always be advantageously preceded by three or four grains of calomel. In regarding the operation

of purgatives, we should take very especial notice of the nature and the quantity of the evacuations. This is a never-failing source of deception to those medical men who depend upon the answers of the nurses, after very superficial inquiry. They are assured that the bowels have been well opened, that the medicines have operated exceedingly well, and that the patient has had ten or twelve evacuations,—when probably *no feculent matter* has been rejected, nothing but slime and mucus, and this of course in small quantity. As this sometimes depends upon hard fæces being impacted in the rectum, it is always advisable to have recourse to clysters. These will often bring away one large hard lump of excrement, and the medicine that has been administered by the mouth will then operate freely and effectually. Other purgatives, of course, may be employed besides those which we have mentioned; and far more depends perhaps upon the manner in which the practitioner manages them, than upon the particular drugs that he employs.

As this disease is very much attended with inflammatory action in the abdomen, it is often very serviceable to apply a few leeches round the navel, even though the tenderness upon pressure is not severe. If tympanitis is present, especially soon after its appearance, leeches are exceedingly useful, and tend more than any thing else to overcome it. It is astonishing, also, how much, by their application, the fetid odour of the evacuations is removed, when purgative and alterative medicines alone have failed. We have often found it necessary to repeat the bleeding several times at the interval of three or four days. This has been more particularly the case when the patient is ten or twelve years of age, and still more so when it attacks girls at the time that menstruation should commence. In the last case, leeches are most serviceable when applied to the vulva.

The indication for repeating leeches can scarcely be misunderstood, the improvement after their first application is so decided. In a case which we have now under our care, they have been repeated seven or eight times, with calomel every other night, and a mixture of vinum aloës and infusum anthemidis, three times a day, in half-ounce doses. The medicine had been given for a week before the application of the leeches; but there was no improvement till afterwards. Blisters may also be applied to the abdomen with great benefit.

It is no unusual thing in this disease to meet with worms in the dejections, and generally lumbrici. These are often supposed to be the cause of the whole of the malady; and

upon their expulsion all medicine is suspended. No mistake can be more fatal than this. Worms are in no case *the sole cause* of disease, though they may be the cause of great aggravation of symptoms. They never form in a healthy body, and ought always to be regarded as one of the phenomena of disease, depending for their evolution upon the same cause with the disease itself. The treatment, then, is the same; they must be expelled, and their origin must be removed.

So far as our experience has extended, and we may honestly say that it has been very great, it is an unsafe thing to give the oil of turpentine by the mouth to children; and what is more, we believe it to be unnecessary. It may be given by glyster, and if a portion of rhubarb, jalap, and calomel, be administered, this plan will generally be found sufficient for the mere expulsion of the parasites. The removal of the accompanying disease will be the same as if worms had never been present.

We have spoken so much upon diet in a former paper, that we are unwilling to return to it at any length; but attention to it is unquestionably one of the most important remedies in the treatment of marasmus. Nor less is pure air necessary; and often will every other therapeutic means be vainly enforced, if the patient shall remain confined to the thick and heavy atmosphere of a town. Clothing, also, here forms a most essential part of the treatment; and exposure to great varieties of temperature must be most carefully avoided.

Little has been said upon the general medical treatment of this disease, nor is very much requisite. After the very early stages, we have little in our power except that of giving relief. But if after having removed the most urgent symptoms, we find the patient suffering under great debility, we may recur, though still with great caution, to tonics and general strengthening remedies. Dr. W. Heberden, has advised the exhibition of Peruvian bark; but it is seldom that the stomachs of children will bear this drug. How far the sulphate of quinine might be serviceable, we have no opportunity of pronouncing; we have never tried it in young children. The medicines we have most frequently employed ourselves have been the combination we have referred to above, or others of a similar nature, and united in greater or less quantities with the fixed alkalies. We do not know, however, that any one particular combination deserves especial recommendation. It is rather the principle upon which they are prescribed, than the individual drugs, that require atten-

tion; and this is manifestly to support the strength without producing any undue excitement, while we correct the vital functions.

When marasmus is the consequence of measles, and it is a sequela of this, even more perhaps than of the other exanthemata, it is always attended with inflammation. Sometimes there is pneumonia only, but far more commonly abdominal inflammation is also present; and we have pain, griping, tenesmus, or diarrhœa, hectic fever, rapid emaciation, and death. Its inflammatory tendency is that which most requires notice. There is always a tendency to it after measles, which will be very often removed at once by a timely purgative; but if this should not succeed, recourse must be had immediately to leeches and an antiphlogistic treatment. Its attack after measles is well known among the poor, though they sadly mistake the proper treatment. For a day or two after the eruption has subsided the patient appears to be doing well; but in most cases, about the seventh or eighth day from the commencement of the exanthema, the child droops again, and this is the proper time for giving an opening medicine. If it should be neglected when this symptom has appeared, marasmus may be completely established. Wine should be most strictly prohibited. The after-treatment will be the same as in marasmus from any other cause.

The diseases which we shall now mention should, in strict order, have followed convulsions; but as we rather intend here to mention some of the more important maladies than to make a complete compendium of the diseases of children, it is not very important. At the same time, we may mention that chorea sancti viti is a frequent attendant upon that state of the system which is understood by the term marasmus.

Chorea Sancti Viti.—The appearance of this disease is too well known to require particular description; it is seldom dangerous, although we have known one instance in which it terminated in a fatal affection of the brain in a fortnight only from its first attack. When it has continued long, there is generally a weakening of the intellect, in some cases approaching to pure idiocy. It is a disease very liable to return, and in some cases the slightest agitation of mind will induce a relapse.

The treatment of this species of convulsion ought first to be conducted on general principles, and what have been called specifics only should be resorted to when other methods have failed. Hence, consequently, bleeding, and a

general antiphlogistic treatment, should be pursued if the patient is plethoric, and the general health (by this term meaning the digestive functions and the excretions) should be corrected.

It has been said, that this last may be effected, and yet that the disease will remain. We confess, that on this subject we are somewhat incredulous; and from our own experience are rather inclined to believe that specifics act as alteratives in particular constitutions, and not that they have any peculiar operation in individual maladies. Without entering into the general question, we shall slightly enumerate some of the principal remedies that have been recommended in the treatment of chorea.

Purgatives have been very highly recommended, particularly by Dr. Hamilton, in this disease; and there is no question but that they are often very serviceable. They require, however, frequently to be continued for a long time, and the amendment of the convulsions has appeared to us always to have coincided with the improvement in the appearance of the dejections. We have at this time a girl under our care who is good illustration of this remark. The convulsions had nearly ceased under a course of purgatives, the faces having at the same time become more natural, when she had a severe relapse, and the next morning what passed from the bowels was as bad in appearance and odour as it had ever been.

The metallic salts and oxydes have been tried extensively, but with very various success. Zinc, which was formerly the favourite medicine, appears now to have lost its reputation; how far deservedly we cannot decide from our own experience. Iron is still occasionally useful when the constitution will admit of its exhibition; but it must be employed cautiously, as from its stimulating effects it is calculated, in many cases, to increase the malady.

Arsenic has perhaps more satisfactory evidence in its favour than any other metal, though probably there will be found many cases still in which it may not prove successful. The dose usually employed has been three or four drops of the liquor arsenicalis of the pharmacopœia, increased to fifteen or twenty drops as the patient can bear it, and repeated three times a day. Mr. Salter has related four cases in which the cure was indubitably owing to the arsenic, 'as no other medicine was used, nor was any change of regimen allowed. By a perusal of the cases,' Mr. Salter states, 'it will be observed, that whilst the patients were taking the solution the bowels acted freely; and in the case of Elmes, the

peristaltic motion was considerably increased ; indeed, I am inclined to believe, that it exerts some degree of purgative influence upon the intestinal canal.' Mr. Salter adds an explanation of this, which, being merely hypothetical, we omit.

All the medicines termed antispasmodics have been, and still are, employed in the treatment of chorea ; but they seldom, if ever, afford even relief. They may perhaps assist the action of tonics where these last are necessary.

Oil of turpentine has been recommended for this disease. Whatever virtues it has, however, are unquestionably dependent upon its action on the alimentary canal. It has certainly appeared to us frequently to effect a salutary change in the secretions of the intestines, when all the common remedies have failed. We do not think that for this purpose it is necessary to give it in very large doses,—fifteen or twenty drops are fully sufficient; and this may be repeated three or four times a day.

We should extend this article to a very inconvenient length were we to enumerate all those diseases which are named in books as infantile ; we have, however, already spoken sufficiently upon individual maladies, to shew upon what principles we ought to proceed in their treatment. With respect to croup, measles, and the other exanthemata, though more usual in, they are not peculiar to children, nor do they demand any farther modification of treatment than what will be naturally suggested to every intelligent practitioner from the difference in the strength of the patients.

Among the works with which we have headed the paper, Mr. North's only is new. Upon the others, the medical public have long since passed their sentence of approval or condemnation. Of Mr. North's, our own opinion is highly favourable : it contains not any thing particularly new, but what he writes from his own experience testifies to an observant and sensible mind. His volume forms a very good text-book upon the convulsions of infants.

IV.

ON HYDROCEPHALUS ACUTUS.

Recherches Anatomico-Pathologiques sur la Meningite Aiguë des Enfans, et ses principales Complications. (Hydrocephale Aiguë des Auteurs.) Par L. SENN (de Genève), Interne des Hôpitaux de Paris. A Paris, chez GABON et COMPAGNIE. 1825.

Anatomical and Pathological Researches concerning the Acute Meningitis in Infants, and its principal Complications. (The Acute Hydrocephalus of Authors.) By L. SENN, of Geneva. Paris, GABON and Co. 1825. 8vo. Pp. 149.

ALTHOUGH the effusion of water into the ventricles of the brain may not be the consequence of any one specific disease, but rather the occasional result of many, in particular circumstances of predisposition, yet we presume it now to be sufficiently understood among medical practitioners, that there are some forms of disease in children which so frequently terminate in this manner, as to justify the restriction of the term acute hydrocephalus to them alone; and that the cause of the effusion in these cases is a state of excitement, or peculiar inflammation of the membranes or of the substance of the brain, or of both. We also consider it to be commonly agreed, that this excitement or inflammation may either be idiopathic or dependent on previous disorder of other parts, most commonly of the bowels, particularly when such disorder is accompanied with fever; and that the disease thus produced is of all others the most insidious in its attacks, and the most fatal in its results. In no disease is correctness of diagnosis more important, the subjects of it being in most cases children of a constitution which renders them particular objects of interest to their parents, and the transition from health to hopeless malady being often particularly abrupt. Several authors, and especially Dr. Yeats, have pointed out the benefit of prompt and active treatment in cases where there is reason to believe effusion was prevented by the means employed; but, after all that has been written on the subject, we frequently hear of cases of which the real nature was not understood until their fatal character was strongly pronounced. It is, therefore, incumbent upon us to attend to any author who endeavours to make the difficulty less, although there is doubtless one difficulty which no author can well clear up; for it is quite unquestionable that cases have occurred which have been deemed examples of true hydrocephalus,—that such cases have terminated fatally,—and that no effusion has been found. So many cases of this kind are now on record, that we deem it unnecessary to allude

particularly to authorities, or to quote some striking illustrations from the work before us : and several examples might be contrasted with these, in which there were no superadded symptoms, and yet in which considerable effusion was found in the ventricles. As there is reason to believe that the first disorder in these instances is in the membranes, and that it proceeds to affection of the brain and subsequent effusion, the arrangement of M. Senn's book appears to be founded on practical facts of consequence, the knowledge of which he seems to have carefully collected whilst house-pupil in the hospital for children at Paris. It was Dr. Quin's opinion, that ' the disease in question (dropsy of the brain) always owes its origin to a morbid accumulation of blood in the vessels of the brain, sometimes proceeding to a degree of inflammation, and generally, but not always, producing an extravasation of watery fluid before death.'

Not to dwell longer on the pathology of effusion, the greatest interest will be confessed to attach to the diagnosis of affections of which the tendency is to terminate in it ; and the best method of establishing diagnostic correctness is of course to attend closely to the symptoms, both of acute inflammation of the meninges, and of its complications and consequences, considering inflammation of the brain and effusion in the light of such.

Without attaching any particular importance to them, M. Senn adopts the divisions previously made of this disorder into three stages. The *first* stage, or that of accession, is characterised by headach, generally seated in the forehead or confined to one side ; and as this symptom is not so easily remarked in patients whose sensibility is not great, it is important to observe, that it occasionally continues sometime without fever, or any redness of the face or of the conjunctivæ, particularly in patients debilitated by previous diseases ; but when the pain is more pronounced, it is accompanied by increased sensibility of the eyes, and the patients avoid the light : the conjunctivæ also are frequently injected : there are sudden exacerbations of pain, particularly in the evening and night, not of long continuance, during which the patients express their sufferings by cries of so peculiar a character, that M. Coindet has given them the name of hydrencephalic. According to M. Senn, who, indeed, in this only follows other writers on the same subject, no one who has once heard these cries can mistake them. The next symptom of consequence is bilious vomiting, not bearing proportionable relation to the epigastric sensibility, or to the state of the tongue, but so obstinate as scarcely to admit of relief : this symptom is of great importance, particularly if accompanied

by obstinate constipation, which is among the most constant of the symptoms of incipient inflammation of the membranes. In this stage of the attack there is generally a great degree of agitation; the patient continually moves his head on the pillow, and changes his position every minute; the countenance is anxious, and questions are answered with unwillingness. The state of the respiration is also remarkable, being generally irregular, interrupted, and from time to time *sighing*, another peculiarity of inflammation of the membranes. The pulse is generally quickened in this stage; but whether it is quickened or not, its proportion to the frequency of respiration is almost always affected. Delirium is not an unfrequent symptom in the beginning in vigorous subjects, and sometimes there are convulsive movements of the face and superior extremities, which in young children are often the chief indications of the nature of the malady. M. Viesseux has drawn the attention of practitioners to a peculiar state of the urine in these cases,—a micacious or crumbly appearance (*micacées*), which, according to him, certainly shews the nature of the complaint.

In the *second* stage, all the above symptoms continue, or are increased, with the exception of the bilious vomiting: the paroxysms of pain are more frequent, the cries piercing, and the face is often characteristically coloured for a few moments: at the end of the paroxysms, the patients appear exhausted, but do not sleep; and in this state the irregularity of the respiration is very observable, prolonged inspirations succeeding to intervals in which the parietes of the chest seem quite motionless, 'as if the patients had forgotten to breathe, and only inspired when compelled to do so.' The mouth is generally close shut, and the jaws occasionally violently convulsed: the head is directed backwards, the eyes are turned upwards, and there is an oscillation of the pupils: deglutition now begins to be difficult, and the patients are irritable when disturbed. Sometimes during the intervals of repose the pulse is slower. In young subjects convulsive movements now become general; but they are always strongest in the muscles of the face, the eyes, and the upper extremities. The conjunctivæ become injected; or, if they have been inflamed at an earlier period, the inflammation increases. The duration of this, and of the preceding stage, is very variable.

In the *third* stage the collapse is more marked, and almost continual. The jaws are so strongly closed that even fluids cannot be given; sometimes there is slight opisthotonos.

‘The superior extremities are from time to time convulsed, but are not retracted on the chest, as is remarked in the first degree of phrenitis; nor is the extension of the fore-arm painful.’—P. 84.

The pulse becomes quicker, and is small and tumultuous: respiration becomes difficult; the mouth and nostrils are filled with frothy saliva; the skin of the extremities, which up to this time has been hot, or of the natural temperature, becomes cold and purple: the tracheal *râle** is observed, and the sufferings of the patient soon terminate in death. It is, however, to be observed, that complete intermissions sometimes occur, of a very deceptive character.

Such, according to the observations of M. Senn, are the symptoms of meningitis, or inflammation of the membranes of the brain. This affection is frequently accompanied with encephalitis, or inflammation of the brain itself; and a common termination of it is effusion into the ventricles: relating to both these states, both of which M. Senn calls complications of meningitis, it is important to enter into separate consideration. Lallemand and others have noticed, that although when the hemispheres either of the cerebrum or cerebellum are the seat of inflammation, the limbs of the opposite side of the body are affected with pain and contractions, followed by paralysis, when ramollissement is the consequence of the disease; yet that the presence of disease is not manifested by these symptoms when the parts in the middle of the brain are its seat, as, for instance, the corpus callosum, the septum lucidum, the fornix. This contrariety was attributed by M. Lallemand to the isolation of the middle parts of the brain, and their want of direct connexion with the medulla oblongata,—an explanation inconsistent with what is now known of the manner in which the brain is developed. The fact, therefore, remains unexplained. M. Senn gives the following account of the symptoms particularly indicative of inflammation of the parts in the middle of the brain.

‘Together with great oppression, there is in these cases an increased sensibility of the integuments of the trunk: the slightest

* We cannot agree with the reviewer in the *Medico-Chirurgical Review*, that the word *whese* expresses the signification of the word *râle*; neither do we think this word is properly translated *rattle*, by Dr. Forbes; it may very conveniently be naturalised for the sake of conveying a distinct and precise meaning. At the same time, we must say, that medical writers are great corrupters of language, and often employ foreign words from an apparent ignorance of the English tongue. There can be no excuse, for instance, for the frequent employment of the word *grade*, which means nothing more or less than *degree*: &c. &c. &c.

pressure excites complaint, so that one would at first be inclined to believe in the existence of peritonitis, or inflammation of the abdominal viscera. The only way of avoiding error is to extend a similar examination to the parietes of the chest, where the same sensibility will be found, so that the patients utter cries when touched, and push away the hand in a hurried manner. The absence of redness and dryness of the tongue, and of abdominal tension, will also assist our diagnosis.'—P. 87.

M. Senn acknowledges that these observations require to be confirmed by other practitioners, and that these distinctive marks may be obliterated by cerebral congestion, or by a rapid effusion into the ventricles.

Now that the effects of inflammation of the substance of the brain are better understood than formerly, practitioners are less frequently disposed to consider effusion into the ventricles the consequence of mere membranous inflammation. The symptoms attending effusion have also been proved to be less distinct than they were formerly considered. One of the most common consequences of the latter stage of inflammation of the membranes, complicated with effusion, is, in the opinion of the author, opacity, and even softening of the cornea. Mere dilatation of the pupils may exist without effusion.

The morbid appearances found in the different degrees of meningitis are thus described :—

'First Degree.—When inflammation of the membranes of the brain has only lasted a short time, or when it has been actively treated from the beginning, the only thing remarked is often a perfect dryness of the serous membrane, and a strong injection of the capillaries of the sub-arachnoid tissue, particularly within the anfractuosities; with a serous, or gelatinous, or slightly purulent infiltration of the same tissue in the neighbourhood of the crossing of the optic nerves, and of the fissure of Sylvius. If the arachnoid is examined with attention, it is found to be opaline, and without its usual transparency; its resistance is also less, and it cannot easily be detached from the sub-arachnoid tissue without tearing it.

'Second Degree.—When the complaint has lasted longer, particularly in a strong subject, actual pus is found: the membranes are thickened, and easily removed; not only are their vessels strongly injected, but, when carefully examined, small ecchymoses are found in different parts. These lesions are generally most remarked at the base of the brain, in the situations above indicated; from which the inflammation is propagated externally, and also penetrates the ventricles, following the folds of the membranes.

'Third Degree.—It is not uncommon in this degree of inflammation to find the purulent infiltration extended over the superior

surface of the hemispheres, in which case false membranes are sometimes found between the two folds of the arachnoid, and also in the ventricles; and sometimes, when the disease has been of long duration, a commencement of organisation. Little lenticular patches are also frequently found along the course of the vessels, consisting of pus, infiltrated in the sub-arachnoid tissue: these are sometimes mistaken for tubercles.'—P. 94.

In the section on the *causes* of meningitis we find little to excite observation, those pointed out by the author being such as are usually enumerated by writers on hydrocephalus. Much importance is attached to the influence of dentition, and more to the passions than can perhaps reasonably be allowed. In speaking of the pernicious effect of too early intellectual excitement, M. Senn observes that girls, in whom the intellectual faculties are generally more precocious than in boys, are also more subject to meningitis. The occurrence of hydrocephalus has, however, we think, been generally considered more frequent in boys than in girls.

Inflammation of the brain and its membranes in children, is observed by M. Senn to be much more intractable than a similar affection of the thoracic or abdominal viscera; and this observation accords with the difficulty, which all who have written on the subject deplore, of treating true hydrocephalus with success. The preventative treatment, founded on a just consideration of the causes of the disease, seems to promise more satisfaction; and a conviction of the insidious character of this dangerous malady should never allow the vigilance of practitioners to sleep when they have to do with the ailments of children. It is not in this complaint only that great attention is more indispensable to felicitous practice, than extensive learning or brilliant genius.

The impropriety of calling upon children for too great or too early an exertion of the faculties of the mind is, we trust, forcing itself upon the attention even of the vainest parents: no fact seems to have been established by more examples, than that this forcing of intellect has the most deleterious consequences upon the health of those who are the subjects of it. M. Senn justly inveighs against this fault, which is not confined to England; but he also points out in strong terms another means of keeping up an increased circulation in the head, which the children of this generation, in our country, are happily not exposed to; we mean the custom of binding what we may really, without exaggeration, call a thick cushion round the head of a child during the first years of life, with the intention of preserving the head from blows, or injury from falls. This practice, which is commenced very early in France, together with that of

binding up the lower extremities of the children, evidently interferes with the just development of the body, and probably often leads to diseases, not only of the integuments of the head and face, but of the brain and its membranes. To keep the extremities moderately warm, and the head cool,—in short, to favour the equal distribution of blood to all parts of the body, is a rule which comprehends almost every direction which it is necessary to observe. Attention to the general health of children, to their diet, to the air they breathe by night as well as by day, is, of course, necessary, though not more so with a view to preventing hydrocephalus than to the general preservation of a ‘sound body.’ If even well-regulated nurseries did not often prove the contrary, one would conceive it unnecessary to warn nurses against the bad effects of bedding impregnated with urine on the delicate organs of young children: but there is yet much to be done in the way of reform among nurse-maids; and it would be well if it were made a part of their education to learn a little useful knowledge of this kind. It may be of advantage to keep in mind the fact that hydrocephalus is much less common in the country than in large towns. ‘Let us endeavour,’ says M. Senn, ‘to approach as nearly as we can to the customs of the country people. Let us no longer be anxious to have *little men* of ten years old, who at a later age, to use an expression of Rousseau’s, will be *great children*.’

With respect to the curative treatment, as distinct from the preventative, there can be no question that in the onset of an attack of acute meningitis, blood should be taken from the head, and with some boldness. We cannot, however, go so far on this subject as many recent writers have done: not that we dispute their testimony, but because we have frequently been called to children whose deaths have appeared to us to be more attributable to loss of blood than to disease. It is not that the remedy was injudicious, but that the application was immoderate. Thus, we should hardly venture, as some advise, to apply half a dozen leeches at once to an infant of a year old; and if by *poëllettes* M. Senn means the palette containing four ounces, we should certainly not take three or four such measures of blood from a very young child ‘in a few moments,’ as he says he has often done with success. The French practitioners do not yet appear to us to have learned the true employment of the heroic remedy of bleeding: in many cases they fatally neglect, in others, we think, they as fatally employ it. A few pages further on, we find our conjecture respecting the quantity of blood verified, by M. Senn’s recommendation to take sixteen or twenty

ounces of blood at once, either from the jugular vein, the temporal artery, or the veins of the foot. We cannot second his recommendation; nor can we very well understand how a practitioner who bleeds so boldly can entertain any apprehensions respecting the loss of blood from the application of leeches. In speaking of this mode of relieving the head, M. Senn seems to give a preference to the plan of applying the leeches to the nostrils. On the other parts of the treatment, as spoken of by the author, we shall make no observation; his boldness seems confined to bleeding, and in his consideration of all other remedial means, his mind is, we think, clouded with theories which we should fear would exert no very favourable influence on his practical efforts: but when he has been some time out of the air of a Parisian hospital, we should certainly prophecy that he will be a not undistinguished member of his profession.

V.

An Essay on Bathing; with Remarks on the Efficacy and Employment of the Mineral Water at Ashby-de-la-Zouch and Moira; in which are introduced several interesting Cases, &c. By W. R. CUBITT, M.D., Ashby-de-la-Zouch. 1826.

THE waters of Ashby-de-la-Zouch have for some years been gaining a degree of celebrity, although fashion has been too powerfully enlisted on the side of Cheltenham and Leamington, and perhaps too many adventitious advantages are possessed by the latter places, to give Ashby an equal chance as a place of resort. It would be a melancholy thing for those who practise at any celebrated spa, if the only persons resorting thither were such as have any reason to expect benefit from the waters, or even if all persons out of the profession had not more faith in their recommendation of the use of them than is possessed by medical men. Before the appearance of Dr. Cubitt's book, we believe there was no guide of the sort for Ashby; and it perhaps requires some courage, as Dr. C. remarks in his preface, to venture to write on a subject which exposes an author to many illiberal suspicions. The little work we are now noticing has, however, no appearance of having been written from any unworthy motive: the information it contains is, as far as it goes, useful; the style easy and unpretending; and several of the remarks are as much addressed to persons resorting to the sea-coast, as to those who may happen to come within the sphere of Dr. Cubitt's practice.

We do not think it necessary to make any observations on that portion of the work which treats of bathing, in which indeed we find nothing new except a remark at page 42, that tepid bathing, continued for fifteen or twenty minutes, has, in many cases observed by the author, been productive of injurious effects. We wish he had entered into some particulars concerning these cases.

'The two following analyses of the mineral waters of the Ivanhoe baths, Ashby-de-la-Zouch, and Moira baths, Ashby Wolds, are by Mr. Accum and Dr. Thomson. The one by Mr. Accum was made some years since; the other is of a very recent date.

'MR. ACCUM'S ANALYSIS.

'A wine gallon of water contains :

| | | | Grains. |
|---------------------|---|---|---------|
| 'Muriate of soda | - | - | 1904 |
| Sulphate of soda | - | - | 128 |
| Muriate of magnesia | - | - | 208 |
| Sulphate of lime | - | - | 72 |
| Muriate of lime | - | - | 168 |
| Carbonate of lime | - | - | 40 |
| Carbonate of iron | - | - | 16 |
| | | | <hr/> |
| | | | 2536 |

'DR. THOMSON'S ANALYSIS.

'*Specific gravity*, 1.0173.*

'1,000 grains of the water contain :

| | | | Gr. |
|---------------------|---|---|----------|
| 'Muriate of soda | - | - | 17 319 |
| Muriate of lime | - | - | 4 766 |
| Sulphate of lime | - | - | 0 554 |
| Muriate of magnesia | - | - | 0 486 |
| Sulphate of soda | - | - | 0 327 |
| | | | <hr/> |
| | | | 23 452.' |

Among the disorders in which the effect of the above waters is considered beneficial, scrofula is mentioned; but it is observed, that much mischief has arisen from its indiscriminate employment in scrofulous cases. 'To use it where there is a scrofulous internal inflammatory action going on, is like hurling a patient to destruction. The scrofulous cases principally benefited from the Ashby and Moira waters,

* 'Doctor Thomson observes, that the water had a strong smell of sulphuretted hydrogen gas, when the cork was drawn; but he did not attempt to examine how much, because the greater part must have made its escape before he began to examine the water.'

are those where there is debility, without organic inflammation, glandular swellings, and active diseases of the joints.' Dr. Cubitt has either written his little book on a very short acquaintance with the effects of the Ashby waters, or has unaccountably omitted to mention their operation when drank. Cases of scrofula and worms only are mentioned as having been benefited by the internal use of the waters, in both which disorders we suppose the benefit is to be attributed to the muriate of soda; but whether or not the waters are aperient, or whether the digestive powers seem generally to increase during their use, the author has not informed us. Concerning the external use of them, in rheumatism and gout, he is more copious; and we extract the following from among his remarks on this subject:—

'In rheumatic complaints, immediately after active inflammation has been subdued, these waters will be found to act as a powerful restorative, and prevent the chronic stage from taking place. During the acute inflammatory stage they are contra-indicated. In chronic rheumatism the saline waters will be found particularly serviceable, especially so when the complaint is not deeply seated; in the more deeply seated parts, such as in sciatica, it will generally require professional assistance. It has been asserted by respectable persons, that there is no cure for sciatica and lumbago; this is a mistake; they are sometimes obstinate to remove, but yet there are medicines and means which have a decidedly beneficial effect on this complaint. In cases where a nerve has received a mechanical injury, as from a blow, the warm bath in one shape or other, early and judiciously employed, has prevented much pain, anxiety, and inconvenience. It is advisable for those who labour under an active rheumatic attack, or whose system is materially deranged, not to bathe.'—P. 73.

'Those rheumatic cases principally benefited by bathing are in the chronic stage of the disease, and free from constitutional derangement, or as soon as inflammation has been sufficiently reduced. Scarcely any benefit has been derived from warm bathing in rheumatic complaints, except at a high temperature; 107 degrees is as high as I have used it; but at Bath it is used much higher.

'It may be well to caution those who are afflicted with local disease against the practice of allowing a column of warm water to fall upon the part with force: it requires caution in its employment; it is sometimes beneficial; but very injurious effects have been produced by an improper use of this remedy.'—P. 77.

Dr. Cubitt speaks well of the waters used as a bath in obstinate cases of cutaneous disease, and says that benefit has occasionally been derived from them in paralytic cases, very properly remarking, however, on the impropriety, or

rather the danger, of using them even as a bath in such cases, excepting under the direction of a medical adviser.

A short account of the present state of Ashby concludes this little work, by which it appears that great exertions are making to enable it to compete with the most attractive and fashionable watering places. We cannot better conclude our short notice, than by expressing the great satisfaction with which we observe, that Dr. Cubitt has avoided the fault of recommending the waters of the place at which he resides as sovereign against all disorders of the body,—an indiscriminate praise which other writers, similarly situated, have been, we think, occasionally guilty of, somewhat to the discredit of their profession, and greatly to the detriment of many of their patients.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ORIGINAL PAPERS.

I. Case of Neuralgia cured by Acupuncture. By J. HUNTER EWING, M.D.

THE attention of the medical public having been of late much excited on the subject of acupuncture, I am induced to communicate the following case :—

For eighteen months, Miss — had been afflicted, at intervals, with a severely painful affection of the nerves of the right cheek, immediately below the orbit of the eye, and extending to the angle of the lower jaw. On the 14th of January, 1826, she was attacked more violently than usual, and the remedies which had previously afforded some relief now failed. Stimulating cataplasms, warm embrocations, laudanum internally and externally, heat applied externally to the cheek by means of very hot flannels, produced not the slightest mitigation of the pain; and she continued to suffer excessively until the afternoon of the 15th, when acupuncture being proposed, she consented to the operation with this remark, 'any thing to relieve me from this agony.'

The needles were immediately procured, and three inserted about an inch from each other. Two in a line parallel with the inferior edge of the orbit of the eye, and half an inch below it; and a third below, and equidistant from the others. The first two were introduced to the depth of three-fourths of an inch; the last, a full inch. They were inserted very gradually, and with a rotary motion.

The second needle was scarcely introduced, before the patient

exclaimed, 'the pain has entirely left me.' When the third was introduced, she experienced a stiffness in the muscles of the cheek, and a creeping sensation, as if a spider's web had been drawn across the face; but no painful sensation whatever.

Such was the exhausted state of her system from the excessive pain she had suffered, that when thus relieved she requested a pillow to rest her head on, and fell into a gentle slumber.

About two hours after the insertion of the needles, I again visited my patient, and found her still perfectly free from pain, and seated at a table reading. She thanked me for the relief I had been the means of affording her, and requested me not to withdraw the needles, lest the pain might return. Upon being apprised of the risk that might attend their being allowed to remain, she observed that she would rather have a servant to watch her whilst she slept. The propriety of their removal being further urged, she at last consented. There was no return of pain.

The next morning, the patient remarked, that the stiffness of the cheek, and a numbness of the whole right side, continued through the night; and though she did not sleep very soundly, she was free from pain, and rested well.

By the third day, the stiffness and numbness had passed away, and there was no return of pain. Several weeks have now passed, and she has had no relapse, although often since exposed to causes which heretofore had always excited violent attacks. Previous to the operation, she seldom passed as many days without severe suffering.

Although I have performed this operation many times, and been present when others have performed it, I have never seen a case in which its efficacy was so decided, or in which the relief afforded was more unquestionably attributable to the action of the needles.

II. *Case of Presentation of the Placenta fatal at Seven Months of Utero Gestation.* By WALTER JAMES, Member of the Royal College of Surgeons, and of the Phrenological Society, London.

MRS. B., the mother of four children, had been long afflicted with asthma. In November 1825, she experienced an acute attack of pneumonia, which was removed by venesection, &c.: after this illness she became pregnant, and went on to the seventh month in good health; but during the last few weeks she has had a slight loss of uterine blood daily, which she attributes to carrying more than 100 weight of coals on her head for a considerable distance, as it has existed since that time.*

* There may arise a question out of this fact, whether in the natural state the os uteri may not occasionally expand under violent muscular exertion? This is more than probable in those who have borne many children, as the neck of the uterus would be shorter; and in the event of any part of the margin of the placenta being implanted thereon, under such circumstances hæmorrhage must take place. I am strengthened in such an idea, by having examined three women in whom the os uteri would easily admit the fore-

On July the 29th she sent for me; when I arrived she informed me she was seven months and a fortnight advanced in pregnancy, and that she had lost as much as three pints of blood without any pain previously. Still she was not faint; her pulse was about 90, and firm. The point of the finger could be just introduced into the os uteri, but nothing unusual could be detected; I directed her, therefore, to be kept absolutely still on the bed, and cold vinegar cloths applied to the labia, and to take xxm of dilute sulphuric acid, and a quarter grain of opium, every four hours. She had taken three doses of this medicine, when she was again seized with the most profuse hæmorrhage in the night. For some reason, the husband did not seek medical assistance, but went to a midwife who lived near; she arrived near 8 A.M. After waiting two hours, she sent for me, but through absence I did not visit her till 2 P.M. The poor woman now appeared in a dying state; her lips and gums were perfectly pale; the pupil much dilated; her mind wandering upon different things; her breathing was slow and laboured; she was extremely restless, and had that peculiar expression about the inner canthus and *alæ nasi*, pointed out in the London Practice of Midwifery as the unerring criterion of increasing danger; her extremities were of icy coldness, which the midwife stated had been the case since morning: there was at this time but slight hæmorrhage. I applied hot bricks to her arms and hands; gave her nearly an ounce of æther, and four ounces of brandy. After this was done, she said in an audible whisper she felt better. As the midwife did not know whether the liq. amnii was discharged, I proceeded to make examination per vaginam. I found a large knuckle of placenta hanging down in the vagina, the os uteri almost fully dilated. I discovered the dense expansion of the placenta implanted directly upon the os uteri in its thickest part; I passed up my hand on one side, and attempted to thrust my finger through the weaker edge, but failed; I therefore perforated the centre of the mass with my fingers, seized the feet of the child; which I brought down into the vagina, and gave exit to about a pint and a half of liq. amnii; a pain occurred at this time, and although I continued to stimulate the os uteri, it did not return; but hæmorrhage supervened. I saw there was no room for delay, or for calling in a second practitioner, for she appeared sinking; I determined to extract the fœtus without loss of time. The body of the child was with some difficulty brought forth by the forceps, being swollen by putrefaction; but from great rigidity of the external parts, the head was obliged to be opened, and to be extracted with the hook; I then introduced my hand a second time, and endeavoured to produce contraction of the uterus. I also kept up firm pressure on the abdominal aorta, thinking thereby to shorten the distance of the heart's circulation;* but all to no purpose. Life was

finger, and neither of them were pregnant, but all were invalides; one of them is since dead, and the *post mortem* examination confirmed it.

* It is a common practice among midwives to tie ligatures on the limbs to stay the loss of blood; perhaps they may possess some power over the

now fast drawing to a close.* Lastly, I attempted to sustain the heart's action, by keeping up artificial motion of the diaphragm for some time, continuing warm applications to the hands and arms: but by this time the heart had ceased to pulsate for ever. She died immediately after the extraction of the child, being an interval of thirty hours from the first attack of hæmorrhage.

West-Bromwich, Birmingham, Aug. 10th, 1826.

III. *On the Illiberal Resolution of the Board of Trustees of the Hunterian Museum.*

TO THE EDITORS OF THE MEDICAL REPOSITORY.

GENTLEMEN,—I perceive that, by a resolution of the Board of Trustees of the Hunterian Museum, admission to that collection is granted to every person presenting a written introduction from a member of the College of Surgeons in London, or a Fellow of the College of Physicians in London, thus excluding from the privilege the whole body of Licentiates, more numerous than the Fellows, and equal to them in medical education, whose skill and acquirements have been ascertained by examinations similar to their own, and who have been acknowledged equally qualified for medical practice with the Socii themselves.

Why this mark of degradation has been affixed to a class of meritorious individuals, maintaining a respectable station in society, it may be difficult to imagine, whilst the privilege of introducing visitors is granted to the great body of general practitioners and accoucheurs, to persons keeping retail druggists' shops, and even to the most disreputable quacks, who pollute the columns of our newspapers with their obscene advertisements; for it is well known that individuals of this description are members of the College of Surgeons. But it surely behoves the Licentiates in the metropolis to rescue themselves from the foul disgrace; to represent to the

hæmorrhage: I cannot speak on this point; but I should conceive it to be much more rational practice to put on four tourniquets over the arterial trunks of the extremities, and keep up unremitting pressure upon the left of the spinal bodies, so as to command the flow of blood through the abdominal aorta until contraction of the uterus should take place, which the presence of the hand would necessarily facilitate. For it is not to obstruct the extent of venous circulation that our intentions should be directed, but rather the arterial, the contents of which vessels must be so materially diminished. In this way, the brain, heart, and lungs, would receive an adequate supply of blood for the sustentation of life. This plan must of course be second to the practice of transfusion; but I throw out the hint that others may in the absence of the latter treatment give trial to compression, the propriety of which, as well as of transfusion, can, I think, be maintained on philosophic principles.

* The pressure of the gravid uterus appeared to act beneficially in compressing the abdominal vessels, and preventing collapse; for immediately after the removal of the child life began to fail.

trustees the injustice of thus excluding them from the opportunity of visiting the museum, intended by the Legislature of the country for the use of the *whole profession*, unless they submit to obtain, by favour, perhaps from an individual of inferior rank to themselves in the profession, that which should have been conceded of right.

In bringing this subject before the profession in the pages of your Journal, you might probably be the means of inducing some of the older Licentiates, deservedly possessing much influence, to take up the matter, and procure for their degraded brethren an equality of right at least with other practitioners.

I am, &c.

A LICENTIATE.

August 21, 1826.

SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. Scientific Institutions.—London University.

THE 67th Number of the Quarterly Review contains an interesting article on the scientific institutions established in different parts of the country, and in particular those of Cambridge, Manchester, Cornwall, Liverpool, Bristol, and Yorkshire. We have read this article with particular pleasure, because it indicates a liberal feeling on the subject of a neglected branch of knowledge, in a quarter where the prejudices of education might be expected to operate against it; and we may also add, that it is not disagreeable to us to see opinions which we have more than once advocated in this Journal, sanctioned by such respectable and enlightened authority.

To enter fully into the causes and the effects of the neglect of scientific studies at our two English Universities, would be somewhat out of place here: we rejoice to know that the error, if not acknowledged in words, is at least felt, and that various steps have been taken, or are now taking, to make the education received at Oxford and Cambridge of more general utility. The value of knowledge was never more appreciated than it now is, and numerous institutions are rising up, both in the provinces and in London, to gratify the thirst for its acquirement. We are not among those who so far distrust the Providence which over-rules us, as to apprehend that this general cultivation of human intellect will lead either to confusion or to unhappiness.

Among the different establishments of which some account is given, the College of Surgeons is mentioned; and the passage in which it is spoken of may very properly find insertion here.

The College of Surgeons was founded in 1800; and in the same year the museum of the celebrated John Hunter was purchased by Parliament and given to the institution, upon condition that twenty-four lectures should be delivered annually to members of the profession of surgery, and that the museum should be open

to the public under certain regulations. The collections of John Hunter remain a lasting and memorable example of what may be achieved by the talents and perseverance of one man; and while they would, in every case, be of value from their extent and variety, they are rendered far beyond all price, as being explanatory of the original and comprehensive views of nature which that great philosopher entertained. Besides the numerous specimens now exhibited, he left behind him nearly one thousand drawings, with a view either of illustrating the preparations now in the collection, or of supplying deficiencies. In these the external forms of many animals, as well as their anatomical structure, are delineated; and particularly those delicate and evanescent peculiarities in the organisation of some plants and animals, which are discernible only in living subjects. These most curious and valuable materials have long been suffered to remain in obscurity; the knowledge of their existence even has been till lately concealed from the public; but we rejoice, no less for the honour of the College of Surgeons than for the interests of science, that the publication of a selection from the drawings is now in contemplation, as soon as a descriptive catalogue of the collection can be completed. Such a catalogue has long been wanted, and the Board of Curators could not have chosen a person more eminently qualified for the task than Mr. Clift. But notwithstanding his profound anatomical knowledge and industry, we foresee with regret the inevitable delay that must attend such an undertaking, imposed as it is on an individual. The present state of the collection is such, that the public may, we fear, regard the accomplishment of the desirable objects above mentioned as almost indefinitely postponed.

For illustrating the internal organisation both of animals and plants, and the manner in which, under different circumstances, the same functions are carried on in different genera and species, we may pronounce this superb collection to be unrivalled. But in its osteological department, it is far excelled by the Gallery of Comparative Anatomy in Paris; that of the College of Surgeons being deficient in some of the genera, while the Museum at Paris contains nearly all the species of at least the higher order of animals. Publications of the highest merit in comparative anatomy have lately appeared in France, for which the very materials might have been long wanting, had not their national museum been enriched under the active superintendence of M. Cuvier, with such noble accessions. It is humiliating to acknowledge, that no Englishman could even now be the author of similar works, without access to museums such as exist not in his own country. As there is not sufficient space in the College of Surgeons for the display and arrangement of a great portion of such osteological treasures as are at present deposited there, and as these are consequently referred to with great inconvenience, it is a subject well deserving serious consideration, whether an osteological collection should not find a place in some of the new apartments to be erected in the British Museum. That such a collection should be wanting in a country enjoying, in

so pre-eminent a degree, every facility for obtaining materials, reflects discredit on the nation. Even the private collection of Mr. Brookes, a spirited and meritorious individual in our metropolis, surpasses that of the College of Surgeons in this noble department of anatomy. An acquaintance with the structure of inferior animals enlarges our knowledge of the human frame; a complete gallery of comparative anatomy is therefore peculiarly desirable in England, where our students procure human subjects with so much difficulty and expense. Osteology has also recently acquired an additional source of interest from its intimate connexion with geology—a connexion supplying a new and striking illustration of the mutual dependance of the sciences on each other.

Not the slightest allusion is made, in the course of the paper from which the above extract is taken, to the London University, although no institution not yet actually established promises to have such wide effects on the general information of the middle classes of this country, those to whose desire for wealth or distinction, and their activity in the pursuit of them, we have chiefly to trust for those exertions wherever the vast intercourse of England extends, by which the largest acquisitions will be made, not only to the wealth and power, but to the scientific stores of the country. If the museums of other countries are richer than our own, if the activity of our Northern neighbours has been too much for us in almost every department of intellectual industry, and has given them a deserved ascendancy in many walks of life, in all the countries to which the dominion of Britain is extended, we do not hesitate to ascribe it to the difficulties which have beset the English youth in the pursuit of useful knowledge; and if it were only because it promises to remove these difficulties, we should hail the London University as a blessing to the rising generation of England.

Nothing is more to be regretted, nothing can be more unfortunate for the real interests of society, than that a subject, relating chiefly to matters connected with learning and science, should become entangled with such political considerations as convert it into a party question. The subject has then but a small chance for fair treatment,—both parties are generally a little wrong, and railing takes the place of argument. Such has apparently been the case with respect to the proposal to establish an University in London; and to such a degree have ignorance and timidity operated on the one hand, and contempt and anger on the other, that it is almost impossible to mention the subject in society, or allude to it in print, without exciting feelings very inconsistent with the calm consideration which its importance deserves. An institution, of which the first effect will be to facilitate the acquirement, by the higher and middle classes of society in England, of those branches of knowledge in which they have so long been accustomed to appreciate the superiority of the Scotch, and which would lead as a direct consequence to very great individual and national benefit, is by certain persons looked upon as no less than a plot for subverting the

speak, is not less so to that which has been the principal object of our observations.

'When we are considering, therefore, these institutions in the light of schools for the improvement of students, we must look beyond the benefits reaped by the members of these associations, to the powerful impulse given generally to the cultivation of science and natural history, by the opportunities thus extended to a certain class of the community, to direct their minds, and devote their lives professionally to these studies. The effects of such excitement will, at no distant period, be felt throughout the nation, particularly when the rank and importance of these societies have increased sufficiently to render the office of lecturer an object of ambition as well as a source of emolument. There is one class of students, the cultivation of whose minds will be eminently favoured by access to lectures delivered in the provincial institutions; we mean those who belong to the different departments of the faculty of medicine. It is impossible to peruse the Transactions of the Manchester Society, or indeed the scientific publications of the country at large, without feeling that we are indebted to the exertions of the members of this profession for a very large part of the progress made in science and natural history, particularly in chemistry, anatomy, and physiology. Yet few only of the medical practitioners in our provinces are educated at our Universities. A large proportion have never resided in London or Edinburgh, or the other recognised schools of medical instruction; and they who have enjoyed these advantages, have been compelled to apply the short period allotted to such residence to subjects immediately connected with the practical duties of their profession. The principal benefits of an University education will now, in many of our county towns, be placed within the reach of the followers of this profession. The frequent meetings of the members of the new societies must also be enumerated among their means of contributing to the improvement of students, in which authors equally participate. The active interchange of ideas, and discussions on topics of common interest, thus promoted, awakens and directs the spirit of inquiry, supplying a constant stimulus, and fresh energies to the mind.'

II. *An Account of several Cases of Poisoning with Arsenic, in Illustration of the Delicacy of the Chemical Evidence, and Weight of the Evidence drawn from Symptoms.* By ROBERT CHRISTISON, M.D., F.R.S.E., Fellow of the Royal College of Physicians, and Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.

[Continued from p. 174 of our last Number.]

'Having premised these observations, I shall now proceed to detail the cases.

'CASE I.—The first I shall relate happened last September, in a remote part of Scotland, and would have been the subject of a criminal trial had not the supposed murderer anticipated justice, by

strangling herself in prison. The grounds of suspicion, and leading points of moral evidence were the following :—

'T. S., the deceased, died after somewhat less than two days' illness. His wife had for some time lived on bad terms with him, had been often reprimanded by him for alleged loose conduct with the crew of a cutter, and, in consequence, had several times threatened to be revenged on him. She did so in particular the night before he took ill. Two or three days before that, she went to a schoolmaster in the neighbourhood who practised physic a little, and asked for poison to kill a dog, which, she said, often broke into her house, and ate the meat. As several dogs were known to be living wild in the vicinity, and to have done much mischief among the sheep, he believed her story; and, after offering her *nux vomica*, which she declined, under the pretext that she had already tried it without success, he gave her half a drachm of arsenic, with strict injunctions to take care no person ran any risk of being hurt with it. According to her own account, she never laid it for the dog; indeed there appears to have been no dog to lay it for; but ~~put~~ it beside two other powders on the edge of a sieve hanging on the kitchen wall. These powders, containing one of them alum, the other alum and cream of tartar, had been given her by the same person for some trifling complaint, and were wrapped up in the same way as the arsenic. After the funeral, suspicions having arisen in the schoolmaster's mind, he inquired about the symptoms that preceded the man's death; and, in consequence of what he then learned, he sent his servant to ask the widow to return him the arsenic, if it had not been used. It had not been used for the purpose for which it had been obtained; but she was unable to produce it, and gave very contradictory accounts of the way it had been disposed of. The only other moral circumstance I need mention is, that, within a week after her husband's death, she applied again to the schoolmaster for a potion "which would produce love in the other sex;" and she confessed that "she had been courting with a lad" belonging to a smack before her marriage, and that it was to make him like her better that she asked for the potion.

'The medical history of the case is defective in regard to the symptoms. The deceased had been for some time in rather an infirm state of health, particularly after receiving an injury of the head from a fall twelve months before. He was liable to periodical attacks of colic, attended, if the prisoner may be believed, with sickness and vomiting. On a Friday morning he appears to have been slightly unwell; but he went to his usual work as a reaper, and was seen returning home in the evening apparently in good health. On Saturday morning he was decidedly ill, could not take any breakfast, complained of pain in the head, breast, and belly, vomited several times, and was very thirsty. In the evening he was seen by a neighbour retching violently, and in great distress. He passed a very bad night. On Sunday morning he was again seen vomiting by the same neighbour; and, according to his mother's statement, he was very low, and so feeble as to be hardly

able to speak. Towards three in the afternoon he felt easier. In the evening he said he should rise; and, though his wife tried to dissuade him, he put his legs over the edge of the bed without assistance. Thereupon, she and another woman helped him into a chair, where he had hardly sat down before he dropped his head on his breast, and seemed to faint away; sweat broke out over his face and neck, and he immediately expired. He died about six in the evening, and therefore probably of less than thirty-six hours' illness. The schoolmaster found, in the course of his inquiries made on account of his suspicions mentioned above, that, besides vomiting, and pain of the belly, the man had likewise had a good deal of purging.

'The body was buried three days after death, and disinterred for inspection fourteen days after that. The following is the verbatim report of the surgeon of K—, who conducted the examination:—

“*External appearances.*—The integuments covering the lower part of the neck, and superior portion of the sternum, were of a dark red appearance; that covering the abdomen, and more especially on the right and left sides, were of a leaden hue: little or no perceptible change on the lower extremities.

“*Internal appearances.*—The whole outer surface of the stomach was highly vascular, and of a dark, livid colour, bearing strong marks of recent and violent inflammation in that viscus, and containing about three or four ounces of fluid.

“The small intestines were covered with a tinge of pale red; but in no part assuming the dark, livid appearance, as exhibited in the outer coat of the stomach. The large intestines were of a healthy aspect, as were also the other viscera of that cavity.

“Having neither the proper tests, nor the conveniency on the island for analysing the suspected fluid, I postponed the examination of the inner surface of the stomach and intestines until my return to K—, where, assisted by Dr. —, and Mr. —, the inner coat of the stomach was found streaked with broad patches of a dark, livid colour, and interspersed with yellow spots of a golden appearance; and, at the part where the inflammation seemed to be most violent, there was an irregular figure or ring, about a line in breadth, and an inch in circumference, of the same golden appearance, firmly adhering to its inner coat; but no abrasion or ulceration in any part of the stomach or intestines, nor any unnatural appearance in the latter, unless a slight enlargement or fulness of some of their blood-vessels.

“Although seventeen days had intervened from the time of his death to the day on which the body was examined, yet, from the comparatively slight degree of decomposition that had taken place, as well as from the great contrast between the morbid appearances of the stomach and intestines, there can be no hesitation in saying

that violent inflammation of the former may be considered as the immediate cause of death.

“ — — —, Surgeon.”

‘ The paragraph omitted relates to the chemical examination of the contents of the stomach, and will be quoted presently. But before proceeding to the chemical evidence, I must hazard a few strictures on this report.

‘ I have frequently been struck with the careless way in which medical reports are drawn up in this country. I have now seen a considerable number; but I can safely say I have hardly seen one which did the author any credit. What will foreign physicians (if any chance to hear or read this paper) think, when I tell them, that the report now quoted is much better than the average? They generally contain a meagre statement of facts; are frequently defective, in so far as the whole organs have not been examined; are commonly couched in ambiguous and inelegant language; sometimes intermeddle with the moral proof; very often give nothing more than an opinion, with one or two facts on which it is grounded; and, not unfrequently the opinion, in relation to the facts, is an absolute *non sequitur*. The worst of this practice is, that not only the inspectors do not supply themselves with the proper grounds of judgment; but likewise persons at the head of the profession, to whom their report is submitted, and whose opinion often, perhaps generally, decides the case, are left without the means of judging, till they enter the witness box; and too frequently cannot form a judgment even there for want of sufficient data. I have long proposed laying before the public some details upon this and some other particulars regarding medical evidence, but have been hitherto withheld by a variety of reasons. In the mean time, as it is not impossible that this paper may fall under the notice of gentlemen of the law, I may suggest that the evil alluded to is one of the chief sources of the disrepute in which medical evidence is held by them; and that but little inquiry is needed to satisfy them how great the evil is, and how easily it may be remedied.

‘ The report of the K — surgeon is faulty in six respects. In the 1st place, the head was not examined. I need not urge in the present day the propriety of opening every cavity of the body; and, above all, the head: it is acknowledged, and enforced by every writer on medical jurisprudence, foreign or domestic. Some foreign courts of law, even in recent times, have qualified the punishment in cases of the most unequivocal nature, merely because the head was not opened. Others, with better judgment, have inflicted a fine on the surgeon who neglects it, and the justice of the peace who connives at his negligence.* In the present case, the prisoner’s

* ‘ In a case in which the prisoner confessed her crime, and arsenic was found in the stomach of the deceased, the court awarded the punishment of four years hard labour only, instead of death, *because the neglect of the surgeon to open the head left some legal doubts as to the corpus delicti*! The Bavarian law, not long ago, inflicted a fine of 5 to 50 gulden on the justice who neg-

counsel might have argued the possibility of death from apoplexy. *Secondly*, The chest does not seem to have been examined; and, on that account, the prisoner might, with great justice, have argued the possibility of sudden death from disease of the heart, or great vessels; for the mode of death corresponds with such a disease. *Thirdly*, The throat and gullet were not looked at, although every toxicologist knows, that perhaps the best piece of pathological evidence is occasionally found in inflammation of those parts. *Fourthly*, In describing the outward appearance of the stomach, instead of confining himself to facts, he calls it, in general terms, inflammation; thereby stating an opinion instead of a fact, and one, too, which is probably wrong. Inflammation of the outer coat (I mean genuine inflammation, and not mere turgescence of the veins, which many mistake for it, and which was probably the appearance observed in this case), is one of the very rarest effects of poisoning with arsenic: its occurrence, indeed, is altogether questionable. *Fifthly*, He ascribes death to inflammation of the stomach. Now, it is a well-ascertained fact, that arsenic seldom causes death by the inflammation it excites, but by acting through the medium of the blood, or perhaps of the nerves, on distant organs. In the *last* place, as will be seen presently, in conducting the analysis he omitted to examine the tissue of the stomach and intestines. It is not necessary to go so far as K—— for examples of this omission. When examining the second case with my friend Mr. Watson, at a village about eight miles from Edinburgh, the friends refused us permission to carry away the stomach, because their surgeon, who was present, assured them, on being appealed to by us, that it was of no use to analyse it. The stomach was procured, however, after he went away; and it will be seen hereafter, that had it not been analysed, the evidence would not have been conclusive.

‘After this digression, I shall now proceed to the chemical analysis of the contents of the stomach. The report contains the following paragraph:—

“In analysing the suspected fluid by the different tests used for detecting the presence of arsenic, we have not been able to discover any marks or trace of that mineral; but, from our not having the chemical apparatus necessary for a complete trial of the more delicate tests, it is recommended, provided it can be legally done, that a still further trial should be made by some practical chemist, in ascertaining the presence of poison; and, for this purpose, a part of the fluid has been reserved.”

‘In conformity with this recommendation, the surgeon was instructed to send the remainder of the contents of the stomach to Edinburgh, which was accordingly done, and it was committed to me for analysis. The analysis was performed three months after

lected to insist on all the cavities being opened, and on the surgeon who disobeyed the justice's request.’—(*Henke über die Gerichtlich-Medicinische Beurtheilung der Vergiftungen*.—*Kopp's Jahrbuch*, vii. 127, 130.)

the man's death. As the result was quite conclusive, and the quantity detected was far more minute than was ever unequivocally detected before in any judicial case with which I am acquainted, I need not offer any apology for giving the particulars in detail.

'The substance transmitted was a thick, slightly viscid, putrescent, dirty-gray fluid, with a few floating coagula; and it amounted to an ounce and a quarter. It was poured into a porcelain vessel, diluted with the washings of the phial, boiled briskly for fifteen minutes, and thus changed into a transparent liquid, with dirty ash-gray flocks suspended in it. The solid matter being separated by filtration, a clear fluid was obtained, of a very pale, straw-yellow colour.

'A small portion of this fluid was tested with lime-water, and the ammoniacal nitrate of silver. Lime-water caused a very scanty, dirty, grayish-white, flocculent precipitate. The ammoniacal nitrate of silver caused a copious, dirty, grayish-white, pulverulent precipitate, without the slightest tint of yellow.

'As the arsenic, if present at all, evidently existed in very minute proportion, and the fluid was too composite as to render the foregoing tests inconclusive; instead of wasting any more of it upon trials with the other liquid reagents, the whole of the remainder, with the washings of the filter, was acidulated with acetic acid, and subjected for fifteen minutes to a stream of sulphuretted hydrogen gas. It acquired, in consequence, a deeper yellow colour, and muddy appearance; which, when the excess of sulphuretted hydrogen was driven off by ebullition, gave place to a considerable precipitate, of a pale lemon-yellow colour, and composed partly of fibrous flocculi, partly of very minute, brilliant scales.* The presumption that arsenic existed in the fluid was thus strong.

'Next morning the precipitate having fallen down, the supernatant fluid was withdrawn with the pipette, and its place supplied with distilled water. The brilliant scales then became still more distinct. The operation of subsidence and affusion being repeated the same day, the precipitate was thrown upon a filter; and, next morning, when the water had passed through, the filter was compressed, and partially dried between folds of bibulous paper. The moist precipitate was then removed, dried in fragments with a gentle heat, dropped into the bottom of a tube, and covered with a little black flux, which was dropped through a paper tube, so as not to soil the glass. The whole material just filled the ball at the end of the tube. Heat was then cautiously applied with a very small spirit-lamp flame. Some water disengaged at first, was removed with a roll of filtering paper. On the farther application of heat, which was raised to full red, a distinct crust was sublimed into the narrow part of the tube. It was smooth, bluish-gray, and brilliant,

* 'This appearance of brilliant scales is not often produced when the quantity is small. The operator will have the best chance of obtaining it if the excess of gas be driven off by a very gradually increasing heat.'

like polished steel externally; crystalline, sparkling, and iron-gray internally, like the fracture of fine steel.

‘The proof of the existence of arsenic was thus decisive. For no other known substance can yield, with sulphuretted hydrogen, a yellow precipitate, from which such a metallic crust can be sublimed. But as I was fully sensible of the influence which the foregoing analysis would have on the issue of the trial, I resolved to leave nothing undone to establish the nature of the crust precisely. For this end I subjected it to a test of great delicacy, elegance, and facility of application, and vastly superior in every respect to the supplementary test recommended in my former paper. It was suggested to me by my friend Dr. Turner, and, so far as I know, has not yet been made public. The portion of the tube containing the flux being removed by melting and drawing it out, the crust was driven up and down by the spirit-lamp flame. At first it kept its polish and iron-grey colour. But at length it was all converted into little detached crystals, white, translucent, of adamantine lustre, and evidently shewing triangular facets under a microscope of four powers. These crystals, I need hardly add, were octaëdral crystals of oxide of arsenic. The tube was weighed before and after the crystals were washed out with distilled water; and their weight thus proved to be one-twentieth of a grain.

‘The solution, amounting to a drachm, was divided into three portions, and subjected to the ammoniacal sulphate of copper, the ammoniacal nitrate of silver, and sulphuretted hydrogen. These tests all gave pointed indications; but it required very cautious management to make them distinct.

‘This analysis left no doubt that the deceased had taken arsenic; and, as the symptoms and mode of death, as well as the morbid appearances, corresponded with what arsenic is known to produce, I could not hesitate to ascribe his death to its administration.

‘Before proceeding to the second case, I shall make a few remarks on the analytic process just related, with the view of establishing its delicacy, and the precautions required for applying it successfully.

‘I believe it is pretty generally allowed, that there is no method by which oxide of arsenic is more completely thrown down from any solution, than by a stream of sulphuretted hydrogen gas; and, therefore, it may be safely assumed, that the quantity in the matter transmitted to me could be little more than a twentieth part of a grain. This minute quantity will never fail to give, in careful hands, the most complete evidence. I have frequently tried it in presence of other people: and every one has been fully satisfied, that the characteristic physical properties of the metal, and of the oxide, may be shewn with certainty. I have likewise tried portions even more minute. A fortieth part of a grain of oxide, dropped into the bottom of a tube, and covered with black flux, gave a crust that exhibited distinctly the above-mentioned characters. I have even succeeded with a hundredth of a grain; but in that case the

lower part of the tube must not exceed the fifteenth of an inch in diameter, and great care must be observed in applying the heat, otherwise the metal is driven off suddenly, is diffused over a large surface, and has neither its iron-gray colour, nor crystalline appearance. The error cannot be remedied by concentrating the crust; for by attempting to do so, the metal is generally oxidated. Dr. Turner has also succeeded in obtaining a distinct metallic crust from a hundredth of a grain.

'I apprehend that, if no other proof could be got, except the formation of such a crust from a yellow precipitate thrown down by sulphuretted hydrogen, these two characters alone would be quite sufficient to establish the presence of arsenic. That is, no other substance can form with sulphuretted hydrogen a yellow precipitate, which, when reduced, yields a crust with the physical properties specified above. Antimony is the only other substance which is likely to occur in medico-legal inquiries, and which can give the yellow precipitate; but the sulphuret of antimony does not yield an atom of metallic sublimate. The compounds of antimony, indeed, are said to undergo a kind of spurious sublimation in the act of being reduced; but if this takes place at all, it never does in a small tube. I have repeatedly reduced the sulphuret, the oxide, and tartar emetic in that way, and have never observed any metallic sublimate.

'But it will be seen from the analysis above, that other characters may easily be added. In the former paper I published on this subject,* I proposed to add to the physical characters of the crust a chemical one derived by Orfila, from its gradual conversion into the arsenite of copper, when placed in a solution of the ammoniacal sulphate of that metal. But the test proposed to me by Dr. Turner is far more accurate and delicate. He has found, that the best method of applying it is to hold the part of the tube containing the crust a short distance above a very small spirit-lamp flame; that the crystals are most distinct when the sublimation goes on slowly; that, when it is conducted rapidly, they form a white crystalline powder; that the tube, where the oxidation is to be carried on, must not be soiled with the flux, otherwise the oxide unites with the glass; and that, with proper precaution, he can procure crystals with evident triangular facets, from the metallic sublimate of a hundredth part of a grain. All these statements I have repeatedly verified. The crystals may even be obtained when the crust is too minute, or too much dispersed, for its characters to be recognised.

'In the analysis in the case, I have even carried the process a step farther still, by subjecting to three of the liquid tests the oxide finally formed. This was quite unnecessary; nor should I recommend any one to follow my example, unless merely to gratify curiosity, because, without very great care, and various little manipu-

* See the Edinburgh Medical and Surgical Journal, July 1824.

lations, the proper precipitates cannot be got from so small a quantity. It would not be difficult, indeed, to get a true precipitate from a twentieth of a grain, with any one of the liquid reagents. But then the whole four should be applied to that quantity. Taking this into consideration, therefore, I am certain, notwithstanding all that has been said of the delicacy of the liquid reagents, that, in the circumstances in which I was placed, no one but a chemist of very great skill would procure with them alone such evidence as would justify a decided opinion.

‘In consequence of some farther experiments, I have no hesitation in adding, that, under all circumstances, whether the arsenic be in a mixed or in a pure solution, provided it be present in such minute quantity, a person about to be sworn in a criminal court would find equal difficulty in making up his mind from the operation of the liquid tests. I do not pretend to say, that, even when it is necessary to apply them all, they will not detect arsenic where it is impossible to shew it clearly in its metallic form. The method of applying them suggested by Dr. Ure, namely, by putting a drop of a solution on a plate of glass, drawing out radii from it, and touching the radii with the tests, would, in an ordinary analysis, satisfy a chemist of the presence of arsenic, when certainly the process of reduction would be of no use. It may be doubted, however, if this concession can be justly made, when the arsenic is dissolved along with such other substances as oblige us to corroborate each test by various preliminary or collateral experiments. But, waving that consideration, would such minute evidence satisfy a person about to be sworn in a court of law? Or, if it satisfied him, would it also satisfy judges and jurymen? I fear not. It is well known to every one who has been concerned with a criminal court, that its members take great liberties with scientific evidence, and repose but little faith in scientific refinements. And, so far as regards the present subject, I must confess I could hardly find fault with a jury, who, viewing the nice management and delicate precautions required for obtaining pointed results with the fluid tests, and taking into account the important tendency of the conclusions drawn from them, should decline putting confidence in the opinion of any witness, more particularly if the witness, as too often happens, is not a practised and skilful chemist.

‘Some may think at first view, that what is now said applies equally to the method I have recommended. But this I cannot admit. Any one who has but a moderate knowledge of practical chemistry may manage the manipulations; the characters evolved at each step are neither difficult to appreciate, nor liable to any important fallacy; and the whole process may be very easily explained to a person of common understanding.

‘The tendency of the preceding remarks, then, is to do away with the liquid reagents altogether in medico-legal analyses. Under all circumstances, the plan I propose is more accurate and conclusive; under all circumstances, it is more easy of application; and,

under all circumstances that can occur in the practice of legal medicine, it is likewise more delicate. As trial-tests, indeed, the liquid reagents may still be retained. Yet, I may observe, there appears little occasion for them even as such; for the sulphuretted hydrogen used in the first step of the proposed process, although, perhaps, not the most convenient, is certainly the most useful trial-test, since it gives indications when the rest fail nearly or altogether;* and its indications are the least liable to fallacy.'

'It is not a little singular that I had scarcely concluded the examination of the foregoing case, when another was submitted me, which shews even more plainly the delicacy of the method I propose; for the quantity of oxide actually present was very little, if at all greater; and in order to obtain it, I had to analyse not only the contents of the stomach, which were nine times more bulky, but likewise the tissue of the stomach itself. The case is interesting and rare in other respects.

'CASE II.—E—— O——, a girl, fourteen years of age, either was, or thought herself, ill used by the family where she lived as a servant, and several times tried to quit their service, but was always brought back by her friends. The last time this happened was a week before her death. In consequence of being thus thwarted, she was occasionally dull and melancholy; but she was not particularly so on the morning when she took ill; on the contrary, she seemed rather in good spirits, and went about her work cheerfully. She was a stout girl; and, except that she complained now and then of headach, her health was habitually excellent.

'About two in the afternoon of the 23d December last, hardly two minutes after she had been seen at her work, and apparently in good health, her mistress found her in bed, yawning and retching a little, and complaining of headach, sickness, and pain in the bowels. As she did not appear by any means very ill, and the family were far from suspecting any particular cause for her illness, they did not observe her very closely; and hence a precise account of her state cannot be obtained. She complained, however, of thirst, and of a sense of coldness; one of the children of the family saw her vomit a little once; and some stuff she must have vomited was found after her death on her shirt and on the floor. There could not have been any purging, as she kept her bed till she died, and no such marks were to be seen about it. At half-past five, the pain in the bowels continuing, her mistress gave her some whisky-punch, which appears to have been the only thing she took during her illness, or after breakfast. About six, she suddenly became blue in the face, and seemed to be fainting away. A surgeon was therefore sent for immediately, and various restoratives were used, but in vain; she made one or two inspirations after his arrival, and expired without a struggle five hours after she first took to bed.

* 'I did not use the ammoniacal sulphate of copper as a trial-test, because it is known not to act well in animal infusions.'

‘ One or two evenings before her death, a girl answering her description and appearance, went to a druggist’s in the neighbourhood, and asked for a pennyworth of arsenic. The person in the shop, a partner of the establishment, after simply inquiring what it was for, and receiving for answer, that it was to kill bugs, gave her two drams of oxide of arsenic, without even putting a label on the paper; and the other partner, who chanced to enter at the moment, merely told her to take care of it, as it was a deadly poison. Her mistress’s people did not send her for poison to kill bugs; and, indeed, there were not any bugs in the house.

‘ The body was taken to a village about eight miles from Edinburgh, and buried three days after death. But, at the request of her friends, a judicial inquiry into the cause of her death was undertaken by the sheriff of this county; and the body was disinterred in pursuance of a warrant for the purpose, and examined by my friend Mr. Watson and myself, the day after burial. The inspection was conducted by Mr. Watson.

‘ There was not any outward appearance worthy of remark, except that the countenance had a very calm expression, and that the skin was nowhere livid. The latter fact I specify, because some absurdly enough imagine that lividity is invariable after poisoning with arsenic.

‘ In the head, the only thing of note was a greater turgescence than usual of the veins of the superficial and ventricular membranes of the brain,—not so great, however, as to amount decidedly to morbid congestion.

‘ The organs in the chest were perfectly natural in appearance.

‘ The veins, as seen on the outer surface of the stomach, were somewhat gorged. The stomach, after being secured by a ligature at each end, was taken out, emptied of its contents, and slit up. The contents were reddish-coloured and limpid, with a few albuminous-like flakes, but no white powdery particles; and they had a smell of some vinous or spirituous liquor. They measured $11\frac{1}{2}$ ounces. The inner membrane of the stomach was every where mottled with small coalescing patches, of an exceedingly faint cherry-red colour, confined to the villous coat; and around the upper orifice there were a few more distinct and very minute scarlet specks. The villous membrane could be peeled off with facility.

‘ The intestines, viewed externally, appeared much injected with dark blood. Internally, the villous membrane had the same appearance as in the stomach; but the shade was even paler. They contained hardly any contents; the small intestines particularly were quite empty.

‘ The contents of the stomach, as well as the stomach itself, were taken to Edinburgh to be analysed; but we were not permitted to carry away the intestines, and it was not without difficulty that we obtained even the stomach. In fact, throughout the whole examination, we were much obstructed by the friends, and a surgeon who

accompanied them; and the wrangling in which we were thus involved, coupled with a deficiency in the warrant, led to the neglect of many points which it was of consequence to ascertain.

' Besides the stomach and its contents, we obtained for analysis, from one of the friends present at the inspection, a white powder found in a box belonging to the deceased.

' The analysis of these three articles was performed by myself, and most of the essential steps were taken in Mr. Watson's presence.

' 1. I commenced with the powder. It was heavy for its bulk, and weighed 26 grains. A small quantity, subjected with black flux to the process of reduction in a glass-tube, gave an abundant crust, possessing all the physical properties of metallic arsenic, (the garlic smell included), and yielding crystals, with triangular facettes, when heated in the way formerly mentioned. The powder, therefore, contained a large proportion of arsenic. Another quantity was heated on an iron plate; it sublimed at a low temperature in white fumes, and left a barely perceptible residue. The powder was, therefore, very nearly pure oxide of arsenic.

' 2. The contents of the stomach were evaporated to a third of their volume, and filtered. The fluid, which had a very pale straw-yellow colour, gave a scanty, grayish-white cloud, with lime-water; a copious, dirty, grayish-white precipitate, with the ammoniacal nitrate of silver, and underwent no change with sulphuretted hydrogen. These tests, therefore, did not give any indication of the presence of arsenic. The remainder was evaporated to the volume of half an ounce, when it acquired a brownish-red colour. In this state, when treated, as in the former case, with sulphuretted hydrogen, it gave an evident brownish-yellow, flocculent precipitate; which, however, was so scanty, that, before proceeding farther, I thought it right to wait for the result of the analysis of the stomach itself.

' 3. Accordingly the stomach was cut into small fragments, and boiled briskly for half an hour, with a pint of water in a porcelain basin, glazed with porcelain. The larger masses of solid matter were then removed, and the fluid filtered. One half of it passed through in two days, and was subjected to analysis by sulphuretted hydrogen, after previous concentration to the volume of half an ounce. A dirty lemon-yellow precipitate was thus obtained, amounting apparently to twice the volume of that procured from the contents. As I was sure I had now got enough to try the test of reduction, I mixed the two precipitates, and, following the course pursued in the former case, I obtained precisely the same results. The quantity of oxide eventually formed, I did not weigh; but it was certainly not greater than the twentieth of a grain. The whole quantity of oxide, including what was in the contents, and in that part of the decoction of the stomach which was not filtered, could not have surpassed a fifteenth of a grain.

' The analysis, together with the symptoms, left no doubt that the girl had died of poisoning with arsenic.

‘ This case presents several particulars, both for comment and instruction. I shall be very short, however, in my remarks, considering the detailed account given of the former.

‘ In the *first* place, the total absence of morbid appearances in the stomach, is a rare fact in the history of poisoning with arsenic. It is not, perhaps, very generally known, yet it has been observed before.* It proves that the arsenic had remained but a short time in the stomach during life; and therefore accords with the account given of the girl’s illness, which probably did not last above five hours. In shortness of duration this case corresponds with every other hitherto published; in which the stomach was found in a natural state; and it likewise corresponds with them in the symptoms having been by no means well marked.

‘ *Secondly*, The want of morbid appearances, together with the almost total absence of arsenic in the stomach, and the fact that the girl was fasting at the time she took it, renders it not improbable that it had been taken in solution. It is not easy to account otherwise for so small a quantity being found in the stomach, when she vomited so little, and had so short an illness. It may be objected, that this method of taking arsenic is very rarely resorted to, and would not likely occur to an ignorant girl. But, on the other hand, she had several times taken laxative salts against her mistress’s wish, for the purpose of making herself ill; and she might consequently be led to use the arsenic in the same way as the salts.

‘ *Thirdly*, With regard to the proof of poisoning, it is clear that the symptoms and appearances after death, while they do not contradict it, hardly uphold it, even by presumptive evidence; that, in short, the case, in a legal point of view, hung entirely on the chemical evidence.

‘ *Fourthly*, By any other method of analysis, particularly by those practised in Britain, there is good reason for believing that the poison would not have been detected. I need scarcely point out, therefore, how important it is that the proposed method should be minutely examined, and become generally known. In my own hands it has hitherto proved susceptible of universal application, and of yielding the most positive proof in the most unlikely circumstances; and I am satisfied that, in the hands of another, it will prove easy of application, though he should be neither a very adroit nor a very practised operator.

* ‘ I may refer to the following cases, as the most pointed of the kind which I have met with in the course of my reading.

‘ Etmuller, *Ephemerides Acad. Cæsareo-Leopoldinæ*, 1715. Obs. 126.

‘ Laborde, *Journal de Médecine*, t. lxx.

‘ Jaeger de *Effectibus Arsenici*. Diss. Inaug. Tübingæ, 1808, p. 23—39.

‘ Chaussier, *Orfila Toxicologie Générale*, i. 155. première édition.

‘ *Medical and Physical Journal*, xxxiv.’

'It is not too extravagant to assume, that, had the process been earlier known, several late judicial cases would have been made perfectly clear, which, for want of good chemical evidence, have excited a considerable ferment in the public mind, and thrown our courts into doubt and embarrassment; and that henceforward we shall not often hear of criminals escaping from justice, because the medical witness could not discover the poison.

'I have said that I have hitherto found this method susceptible of universal application. I can foresee the possibility of one difficulty, however. If the fluid containing the arsenic is ropy and viscous, even after being boiled and acidulated with acetic acid, the sulphuret thrown down may be mingled with so much animal matter, that the metallic sublimate is not distinctly formed, on account of the great quantity of empyreumatic matter suddenly projected along with it. This has happened to me once only out of at least a hundred experiments. In that case an addition must be made to the process. The criterion by which we may know that the additional process is required, is the colour of the precipitate. If the colour is lemon-yellow, or pale brownish-yellow, it is unnecessary; if it is cream-white, the simple process will probably fail. The plan I should prefer is a modification of that proposed by Berzelius, and of the method followed by Roloff (p. 279), for determining the quantity of arsenic in the sulphureous precipitate. Treat the precipitate with nitric acid, and thus convert the sulphuret into sulphuric and arsenic acids; dissolve and filter; neutralise with ammonia, and throw down the arsenic and sulphuric acids with nitrate of lead; reduce the precipitate, which contains arseniate of lead, in the usual way.

'*Lastly*, The unhappy fate of this poor young girl, who was only fourteen, and looked two years younger, taken along with the frequency of similar accidents, will naturally raise our astonishment, that our country should be so long in following the example of the Continental governments, by enacting police regulations for the sale of poisons, particularly in great towns. It may be easily imagined what abuses prevail, when arsenic could be got by such a purchaser. I am far from reflecting on the apothecaries of this town generally: I know that many of them never sell the common poisons but when they know the buyer. They will of course remember, that penal statutes are never intended for the honest and conscientious part of society.

'II. In the second part of this paper I propose to make a few comments on the symptomatological evidence of poisoning by arsenic, with reference to a case in which the administration of it was highly probable.

'We learn from the early history of medical jurisprudence, that, till it had been for some time cultivated as a separate science, great importance was attached to certain symptoms, as distinguishing the operation of poisons generally, and of arsenic in particular; and

sometimes medical witnesses have not scrupled to draw an opinion with confidence from symptoms only. In later times, this kind of evidence has been viewed with gradually increasing distrust; and at length medical jurists have passed to the other extreme, and now hold that symptoms can never lead to more than suspicion, or an opinion in favour of probability. I need not quote authorities for this statement; all late authors seem to be nearly agreed on the subject.*

'Nobody will question the correctness of the doctrine as a general rule; but I apprehend it is liable to several weighty exceptions. How important these exceptions are, will appear, when I mention, that, during the last five years, three British cases have come under my notice, in which the general rule either was, or might have been, departed from; and that a departure from the rule appears allowable chiefly in the very cases where it is most essential, namely, when there is least chance of the poison being detected by chemical analysis. One of the cases, the particulars of which I shall now relate, was referred to Dr. Duncan, junior, and myself, for our opinion.'

[To be concluded in our next Number.]

III. *Observations and Experiments on the Action of the Heart.*

By JOHN WILTBANK, M.D.†

'IN my inaugural dissertation, published in the Philadelphia Journal of the Medical and Physical Sciences for February 1825, were detailed several experiments performed on *cold-blooded* animals, to ascertain the source of the heart's action. So positive and decided did their results appear, that it was at that time deemed unnecessary to repeat or extend them. To afford the reader an idea of their nature, I shall briefly recapitulate the deductions then made.

'From these experiments, it was evident that the action of the heart of these animals must be perfectly independent of the whole

* 'I may refer, however, to the following writers, who are among the best authorities in their respective countries.

'Orfila, *Médecine-Légale*, ii. 360.

'Henke, *Ueber die gerichtlich-medizinische Beurtheilung der Vergiftungen*. Kopp's *Jahrbuch*, &c. vii. 155.

'Tortosa, *Istituzioni di Medicina Forense*, ii. 86.

'Beck's *Medical Jurisprudence*, p. 419. London Edition.

'In Smith's *Forensic Medicine*, which I am disposed to consider, on the whole, the best British authority, there is nothing but an allusion to the subject. He appears to concur with the rest. In one place, Beck says, a decided opinion may be formed from symptoms, although poison be not discovered, provided the evidence from symptoms be supported by other proof; but the proof he alludes to is chiefly of a moral nature, and does not belong to the province of the medical jurist. Some late allusions to the question in the *Edinburgh Medical and Surgical Journal* originate with myself.'

† North American Medical and Surgical Journal, No. 2.

source of the nervous power, as it was in no way influenced by the destruction or removal of the brain and medulla spinalis. After the destruction of these organs, the heart would, in many instances, continue to pulsate precisely as before the experiment, and even the circulation of the blood was perfectly maintained. In another experiment, we removed the heart with its principal vessels from the thorax; and to ascertain whether its power of propulsion was retained, water was poured into the vena cava, which passed into, and rendered turgid, the auricle. The auricle contracting, the water was driven into the ventricle, whence it was propelled with considerable velocity through the elevated orifice of the aorta. Still apprehensive of being deceived, the medulla spinalis and brain were completely destroyed, in another experiment, with a red-hot wire; after which the blood was observed to flow freely, *per saltum*, from the main artery of one of the posterior limbs, at every contraction of the ventricle.

‘These experiments seemed perfectly satisfactory and conclusive. But it has since been objected, and with apparent plausibility, that the warm and cold-blooded animals are altogether distinct; and that it would be impossible, from experiments on the one class, to judge of their results upon the other. This objection, however, will not stand the test of examination. It is true that they are distinct and different animals; but this difference consists merely in their organisation. In both, the action of the heart, the nervous influence, &c., are, as far as we can possibly determine, precisely the same. A heart, a brain, a spinal marrow, and nerves, are attributes of both; and these, to all appearance, are in each governed by the same laws, and serve the same purposes; and I do conceive, that if the heart be governed in its action by the medulla spinalis in one class, it should be so in the other: that if, on the contrary, it be proved, that the heart of a cold-blooded animal is indebted for its action to a “*vis insita*,” we are fully warranted in the conclusion, that the same power is productive of a similar effect in warm-blooded animals. In fact, Le Gallois seems to entertain the same opinion, as a short extract from his memoir will shew. There is an “exact uniformity of the plan by which the nervous power is organised in all vertebral animals, from man down to the reptile; for it is a curious and very important observation of M. Cuvier, that the nerves arise and distribute themselves with exact similarity in all these animals. But,” adds he, “the warm-blooded animals are much less suitable than the reptiles for the researches I have just mentioned, because after the section of the medulla they can only be kept alive by the inflation of the lungs, which prevents their being left to themselves, in order to study their motions; and because after the partial decapitation, the hæmorrhage from the cerebral vessels soon destroys the functions of that portion of the brain which has not been taken off, by stopping the circulation.” In another place, he remarks, “that one of the greatest difficulties was to reconcile the facts observed in cold-blooded, with those

observed in warm-blooded animals, in the adult state—that fetuses exhibit a character very analogous to that of cold-blooded animals. In them, therefore, the bond was to be sought, which would unite the phenomena presented by cold-blooded animals, and the adult mammiferous, submitted to the same experiments.” It therefore appears, from Le Gallois’s own statements, that cold-blooded animals are decidedly preferable. Reflection also convinced me, that the contradictory results of the experiments hitherto performed, were referrible to the readiness with which warm-blooded animals are affected by slight causes; for we know that a very trivial cause, such as anger, joy, or any emotion of the mind, will affect its action very materially; and to have selected the very tender rabbit for such violent experiments, when more proper animals were so abundant, seems to want explanation. If, however, warm-blooded animals are preferred, let there be some selection. Many of these animals are affected by the most trifling experiments, with great severity, even to the destruction of life; others will suffer but slightly from much more severe measures. Willing, however, to discover the truth, I am ready to grant weight to the objection which it does not really possess; and shall, with great pleasure, abandon any idea or theory which is unsupported by facts and experiments. If, upon repetition, these experiments should not be confirmed, and prove the doctrine for which I am contending, and others more forcible be adduced in support of an opposite theory, I am ready to make to truth the sacrifice of my own opinion.

‘ It will not, I think, be doubted, from the experiments referred to, that the heart of the cold-blooded animal is indebted for its action to a power inherent in itself. With regard to warm-blooded animals, their nature will not allow such decided results. They bear the destruction of such an important organ as the spinal marrow very imperfectly; yet the following experiments add strong confirmation to those already performed, and are, I think, perfectly conclusive. The cat, being well calculated for experiments of this nature, and easily obtained, was accordingly preferred. The principal part of these experiments were performed in the presence, and with the assistance, of my friend Dr. O. H. Taylor, and of others, who profess themselves willing to vouch for their accuracy and correctness. It may be well to mention, that every experiment that was performed will be related, so as to preclude the possibility of deception.

‘ *Experiment 1st.*—To observe the natural action of the heart, without the destruction of the brain or medulla spinalis, was the first object that demanded our attention. With this view the following experiment was performed. The cat being secured upon the table, in two minutes the heart was exposed, and its action observed. This was strong and regular, making 130 pulsations in the minute. In three minutes (always counting from the time the animal was laid on the table) the pulsations had become irregular and intermittent. In six minutes the breathing ceased, and sensi-

bility and motion became extinct. The regular and successive action of the auricles and ventricles was now lost, the former making 148, and the latter only 68 pulsations in the minute. In twenty minutes, the pulsations of the auricles were reduced in frequency to 80, and those of the ventricles to 20, in the minute. Nervous twitchings of the pectoral and other muscles were very evident. The coronary vessels of the heart were slightly injected. The natural action of the heart ceased in thirteen minutes; but it could be excited by irritating the heart with a knife. This organ now became very much distended: a large artery in the thorax was divided, through which blood flowed freely from the heart. The heart was now suffered to remain ten minutes, and upon being again irritated, commenced an irregular and rapid pulsation, which continued for a short time. After having been at rest some time, its action commenced again spontaneously,—making in the first quarter of a minute 12 pulsations; in the second, 10; and in the third, 8. At fifty minutes the pulsations had become very weak and slow. In fifty-eight minutes the action had apparently ceased; but upon irritating the heart violently a slight and imperfect action was manifested: after this it entirely ceased.

Experiment 2d.—In opening the thorax of this cat, the carotid artery was cut, and the blood escaped. The heart was now observed to pulsate slowly and irregularly. The vertebral canal was next opened, and a wire passed through the canal into the head, and the whole source of nervous power destroyed. The heart was observed much distended: one of the auricles being opened allowed the escape of some blood. The heart now pulsated as before, slowly and irregularly, and in a few minutes entirely ceased.

This one experiment thus proves, that the motion of the heart continues after the destruction of the medulla spinalis and brain. "But," says Le Gallois, "those motions which still subsist, either after this destruction, or after the heart has been freed from the action of the nervous power in any other manner, are motions without power, and perfectly analogous to the irritable motions observed in the muscles, for a longer or shorter time after death. In the latter," continues he, "those motions only take place when the muscle or the nerve distributed to it is directly stimulated; and one stimulus produces only one motion. In the heart the motions are repeated spontaneously, because the blood it contains is its natural stimulus." From this it was natural to conclude, that if the heart was removed from the body, and perfectly emptied of its blood, the action ought immediately to cease from the want of its proper stimulus. If it could also be made to appear that, as in cold-blooded animals, the circulation still continued, the objection would be completely refuted. We, therefore, continued our experiments as follows:—

Experiment 3d.—Before this experiment was commenced, the action of the heart was regular, making 104 pulsations in a minute. The medulla spinalis was divided, and a red-hot wire passed

through the vertebral canal, and into the brain. Sensibility and motion were completely destroyed: the pulsations of the heart were very slow, but were gradually increasing in frequency. The heart, together with the arteries and veins, was distended with blood; and a large artery, upon being divided, discharged blood freely, at the several contractions of the ventricles. The heart was now taken from the thorax, and laid upon the table, after which it continued to pulsate some time. The frequency of its pulsations gradually diminished, and in ten minutes they had ceased altogether.

Experiment 4th.—A cat was laid upon the table, and an opening made into the vertebral canal, near the head. In ten minutes the wire was thrust through the whole spinal cavity, and into the head. In seventeen minutes the heart was brought into view, when the contractions of the auricles and ventricles were found regularly to succeed each other. The frequency of the heart's pulsations gradually increased in a regular ratio; being in the first quarter of a minute 18, in the second 24, in the third 32, and in the fourth 44; making the whole number of pulsations in the minute 118. The coronary vessels were distended with blood; one of which, upon being divided, discharged blood at every contraction of the ventricle. From this time, the pulsations of the heart were gradually reduced in frequency, and became irregular. In thirty minutes the heart was separated from its connexions with the thorax, and divided transversely into two parts. These separated portions continued to pulsate until the fortieth minute; after which all action ceased.

Experiment 5th.—The action of the heart in this animal, before the commencement of the experiment, was observed to be regular, with 96 pulsations in the minute. In three minutes after the animal was laid upon the table, the medulla spinalis and brain had been destroyed by a large wire. In ten minutes, the thorax having been laid open, and the heart exposed, 80 regular pulsations were counted in the minute; they were, however, weaker than before the destruction of the nervous power. One of the carotid arteries was punctured in fourteen minutes, and the blood was observed by all present, (Drs. Taylor, Smith, and myself,) to flow freely from the opening, per saltum. In sixteen minutes the coronary vessels were seen well injected with blood, and the pulsations of the heart, which were now noticed, were regular, and 34 in the minute. In twenty minutes the pulsations were reduced to 20; in twenty-two minutes to 16; in twenty-five minutes to 12; in thirty minutes to 5; and in thirty-two minutes to 3 in the minute. These pulsations had now become irregular, but there was still perceived some action. The heart was now (thirty-seven minutes from the commencement of the experiment) removed from the body, and divided into two parts by a horizontal section. Even now some motion could be excited in the auricles and ven-

tricles, by irritating them with the point of a scalpel. In forty minutes the motion was still very evident upon irritating the separated portions; but very soon after this it ceased entirely.

Experiment 6th.—The pulsations of the heart of this animal, before the experiment was begun, were 240 in the minute. Four minutes were consumed in destroying the medulla spinalis and brain, and two more in opening the thorax, and exposing the heart. The contractions of the auricles and ventricles, which succeeded each other with great regularity, were 120 in the minute. The coronary vessels were beautifully injected, and a small artery which was open discharged some blood. In ten minutes the ventricles had ceased to beat, but the auricles were making 80 contractions in the minute, with great regularity. Spasmodic twitchings were, in this experiment, observed in the diaphragm. One of the pulmonary arteries, upon being emptied of the blood it contained, immediately became again filled, and upon being divided bled. In twenty minutes the contractions of the auricles were regular, and 36 in the minute. In thirty minutes the right auricle alone continued to pulsate, which it did at the rate of 12 times in the minute. In forty minutes it pulsated, though very irregularly, 8 times in the minute. In fifty-two minutes the auricles and ventricles could be made to act by irritation; but in seventy minutes, when they were again examined, all motion was at an end.

These experiments are sufficient to remove every objection, and we are again forced to the conclusion, that the *vis insita* of Haller is the cause of the action of the heart in the warm, as well as in the cold-blooded animals. Any other conclusion is impossible, from the direct tenor of all the preceding experiments; but, independent of experiments, facts are not wanting to the support of the theory. We know that in the embryo, the first things capable of being observed, are the brain and the pulsating heart; and that these organs, especially the last, bear a vast preponderancy in size and perfection to every other part of the fœtus. Now, here it is next to an impossibility to conceive of the heart deriving its action and power so freely and perfectly from such a small and imperfect organ as is the medulla spinalis at this period.

Besides, the continuity of the medulla has been known, in several instances, to have suffered an interruption and partial annihilation in the human species, without inconvenience to the action of the heart. The following dissection and examination of the spinal marrow in a case of curved spine, related by Dr. Rullier, in Magendie's Journal, are very interesting and conclusive. After observing that the brain was very firm and sound, he goes on to state, that "the vertebral marrow, examined with care in its place and by its posterior face, appeared to us in its natural state, from its origin, as far as the fourth pair of cervical nerves. The two inferior thirds of its dorsal part were equally sound; but between these two parts, viz. for about six or seven inches in length, com-

prised between the two inferior thirds of the cervical region, and the upper third of the dorsal region inclusively, and corresponding to the eighth or ninth pair of nerves, this part displayed a most remarkable alteration: it was soft to such a degree of fluidity, that the canal formed by the dura mater appeared to be full of a real liquid, which followed the direction of its gravity, up or down, according to the position of the body; but this liquid, which thus distended the covering of the marrow, stopped precisely at those parts of this organ which remained in their natural state. A small opening being made in the dura mater, immediately let a quantity of this fluid run off: when the membrane had been cut through, the spinal marrow was seen covered with its proper membrane; it was of a reddish-gray, and extremely soft; it presented a sensible fluctuation,* and the opening of its membrane allowed a liquid, mixed with small flakes of medullary matter, to run out. We afterwards made a large opening, and a longitudinal incision in this part of the marrow, which presented to our view an elongated cavity filled with a sort of grayish light red fluid, in which a great number of red and extremely thin capillary vessels were dispersed." M. Magendie makes an important remark on this case, in connexion with the subject before us. "With regard to the motions of the heart," says he, "the fact of Mr. Rullier is very curious; for after the investigations of Le Gallois, a considerable diminution of the mass of the spinal marrow ought so to diminish the force of contraction in the heart, that the blood would not be able to arrive continually at the lower extremities; and yet the circulation was perfectly maintained."

"Two cases deserving attention have also been related by Dr. Olivier. The first of these occurred in a child of eight or nine years of age, in which a complete deficiency of the spinal marrow existed from the ninth dorsal to the first lumbar vertebra, that is, about four inches. In the other, a girl of thirteen years, at the lower part of the dorsal region, the nervous pulp, reduced to a putrid state, was converted into a pultaceous matter, and was deficient for four or five lines. Dr. Good, in his invaluable treatise on the Study of Medicine, while speaking of some subject connected with the present, says, "it is well known that the heart, when dissected from the pericardium, has leaped from the table."

'In Le Gallois's experiments, also, we could observe that nearly the whole of the spinal marrow might be destroyed, even in the rabbit, without the destruction of the action and power of the heart. This action did not cease, unless a large portion of the spinal marrow was destroyed simultaneously. Indeed, he himself seems to feel the full force of the objection; for he remarks, that

* 'The appearance of this part of the marrow was such, that each of the assistants exclaimed, that there was a dropsy in the marrow itself; in effect, the natural colour of the part had disappeared, and was replaced by an almost colourless liquid, in which some flakes of medullary matter were floating.'—*Magendie.*

"among the difficulties which embarrassed me most, were the differences, sometimes considerable, which I have observed when I wished to determine, with some precision, the exact length of the spinal marrow necessary to the maintenance of the circulation. I proceeded," says he, "as if groping in the dark." And a little further on he says, "After many fruitless efforts to elucidate this dark question, I determined to abandon it, not without regret at having sacrificed so many animals, and lost so much time." So that, reasoning from the experiments of Le Gallois, we should be led to adopt a conclusion directly contrary to what he would wish.

'Dr. Jackson, my friend and preceptor, informed me, that in an experiment performed by him on a cat, which was put into a jar containing oxygen gas, the heart pulsated strongly for eleven hours. Now, had not the heart an independant action, it would be difficult to conceive the cause of the increase of its action in this decisive experiment.

'I may, in conclusion, mention a fact which seems to puzzle even Le Gallois to explain, or conform to his theory. It is, that many cases are recorded of fœtuses having been born, in whom there existed no brain or medulla spinalis. Several instances of this kind have been related, and Le Gallois admits that he knows of two instances, in which we are assured that they have been born alive, without either brain or medulla spinalis. This fact is irresistible, and proves, beyond the possibility of a doubt, that if life and the circulation of the blood can exist without these organs, they are not necessary to the action and propulsive power of the heart. That Le Gallois should admit this fact, and afterwards offer as an objection to the *vis insita*, that fœtuses had been born without a brain, is indeed singular. In reality, every circumstance which he has adduced, can be (especially since the discoveries of Messrs. Bell and Magendie) much more easily explained upon the hypothesis of a *vis insita*, than upon his own theory, however well supported in appearance by experiments and observations.'

IV. *Practical Remarks on the Secale Cornutum, with Suggestions in regard to its probable Modus Operandi.* By CHARLES HALL, M.D., of St. Albans, Vt.

'For the following remarks,' observes the editor of the American Medical Review, 'on one of the most interesting articles of the *Materia Medica*, we are indebted to a gentleman, who, in a very extensive practice, enjoys ample opportunities to exercise his professional acumen upon pathological and therapeutic phenomena. The subject is certainly one which ought particularly to interest the cultivators of American medical science. As a medicinal agent, it was first satisfactorily tested and adopted in this country, although its peculiar effects, fortuitously ascertained, had long been known to the vulgar. Dr. Stearns was the first who redeemed it from among nostrums; and the writings of Bigelow, Tully, and others,

have overcome the professional fastidiousness which had so long rejected it. Still, however, the *modus operandi* of this agent, and consequently the principle controlling its employment, are as yet undetermined, and its value as a remedy by no means fixed, as appears from the conflicting opinions which are entertained in regard to it. In these respects, therefore, it may be regarded as a fair subject for investigation, and it is particularly the province of American physicians to complete the inquiry which has been by them so honourably begun. The facts furnished in the following paper in relation to this subject are interesting and important. The inferences, which appear to have been independently drawn, correspond very nearly with those of Dr. Hosack and some others, who have contributed their observations on this subject.

‘ *Remarks on the Properties and Effects of the Ergot.*—The singular operation of the ergot, when administered to expedite child-birth, has been witnessed with a degree of astonishment; and although its parturient power is rendered *obvious* in many instances, yet the manner in which it exerts its influence is but imperfectly known. Some have considered the effect as specific on the uterine system—others, as sympathetic to a peculiar impression on the stomach and nervous system—some have even viewed it as inert both on the mother and fœtus,—while others have had the strongest conviction of its destructive tendency; and all have been constrained to acknowledge its equivocal character as a remedy.

‘ Although in most cases of real labour the child is forcibly propelled into the world by the aid of this article, there are nevertheless instances in which its power is not exerted to this end; instead of that powerful unceasing increase in the pains of labour, which so astonishingly expedites the expulsion of the fœtus, it sometimes excites constant distress of a general nature, without any apparent influence on the efforts of labour. In cases where it does not favour immediate expulsion, it seems to have a fatal tendency on the child; for in such cases the child is generally still-born.

‘ As the ergot is still held by some in high repute in accelerating parturition, and as the effects attributed to it in this essay are known to have occurred, it is important that we should inquire more carefully into the *nature* of its parturient effects. That it has saved life in some cases, cannot be doubted; that it has destroyed it in others, is equally certain.

‘ My first knowledge of this article I derived from an old woman, among the Dutch inhabitants in this vicinity, in the year 1811. They had been in the use of it to hasten child-birth for a long time. I was at first very incredulous as to its power; I believed it to be like tansy, mother-wort, and various other medicines of this class; but my incredulity was staggered after several times witnessing its effects. Not long after this, I saw public notice of this substance, recommending it as safe and useful in many cases of natural labour. I have since frequently had recourse to it, and have learned, not only from my own experience, but from that of

others, that it does not always increase the pains of travail; that it is hazardous under any circumstances, and occasionally produces fatal effects.

The experiments which have been made upon this singular excrement shew it to be of a poisonous quality. It has not only manifested this property when received into the stomach as an article of medicine, but when its growth has been abundant, and used in the article of bread, its effects have been marked (in France and elsewhere) by extraordinary instances of gangrene among the people. Those acquainted with its use in the time of labour have witnessed that it has produced mental agitation, pulse small and feeble, and that it has deranged in some degree all the functions of life; and in the most auspicious cases, where the child has been preserved, it has been propelled into the world asphyxiated—the circulation of the umbilical cord partially interrupted—the body and extremities much discoloured—and, in many cases life almost wholly extinguished. But when the labour has been protracted, the child has generally been born dead. I have noticed one instance in which the foetus, when expelled, was not only dead and dark-coloured, but its skin was all over completely blistered, though there was undoubted evidence of life but a few hours before, and when the ergot was administered.

In cases of obstructed menstruation, I have known the ergot administered as an emmenagogue, but have never known it remove the obstructions; nor has it in such cases induced pressure or pain in the uterine system. It brought on in these cases great distress in the region of the stomach—agitation of the whole system—nausea, and sometimes vomiting. In one case, there was nearly a table spoonful of the powder taken—it produced oppression about the precordia, general trembling, *discoloration* of the lips, cheeks, extremities, and, more or less so, of the surface generally.

It has been resorted to in vain by the unfortunate, in the earlier months of gestation, to promote abortion. In these cases, as I am informed, the drug has been almost uniformly rejected from the stomach soon after taken, without inducing any apparent influence, either on the womb or foetus. I have given it, in some cases of threatened abortion, attended with hæmorrhage, where it was deemed expedient for the safety of the patient to be rid of the foetus; but instead of a dislodgment, a cessation of the hæmorrhage and of every other symptom of abortion succeeded, and the woman went safely through to the full time. In these cases, also, the drug was vomited soon after its effects were manifested. The well-attested influence the ergot has in checking uterine hæmorrhage, alone shews its immediate effect on the circulation; there are various other proofs which substantiate this position; from which, and from the above, I would proffer an opinion, as it respects the *modus operandi* of the ergot in accelerating parturition, and also as it respects the causes of its failure.

From the researches and experiments of Magendie and others,

it is rendered certain, that there are absorbent veins of the stomach and intestines, by which substances do directly enter the sanguineous system. This truth has recently been illustrated by Prof. N. R. Smith, in his new and interesting theory of digestion. That such is a fact, the quick operation of the ergot serves further to substantiate; that it directly enters the mass of blood, and retards the circulation, its effects on the mother and fœtus go fully to establish; that it contaminates this fluid, and thereby kills the child, the case of vesication of the fœtus from this article, and its tendency to produce gangrene, are confidently referred to.

‘On these truths I would found the belief, that in parturition the child is not propelled by any specific influence which the ergot exerts on the fœtus or uterus; but rather by its poisonous effect on the fluid which sustains life, rendering it unfit for the support both of the mother and fœtus. We have all witnessed, and have ample accounts of the same, that in a state of gestation, any fatal tendency in the mother brings on speedy efforts of the animal economy to save the life of the child by delivery. Cases are in the recollection of almost every practitioner, of women’s dying in this state from disease, who, just prior to death, were delivered of their offspring, which has sometimes survived; hence I would infer, that by the same law of the economy, the child is expelled when the ergot is administered. In favour of this opinion I would notice, that it is only about the period of natural labour that the ergot will induce a dislodgment of the fœtus. That it should not have this effect in the earlier months of pregnancy, it may be remarked, that the resistance to expulsion now is much greater, and the current of blood to the womb and fœtus much less in proportion, than at the full development of the child; hence the fœtal circulation is but slightly affected, the poisonous drug not having so free access to it now as at the later stage of gestation; thence the efforts of nature, that might accelerate parturition at the full time, are now more particularly exerted to expel the noxious cause, and thereby both mother and child are preserved. The want of uniformity in the operation of the ergot goes also in evidence, that its parturient power is solely from the disorder it excites in the vascular system, placing in jeopardy both mother and fœtus; that it excites no specific influence in the uterine system, more than on other parts of the body; that its effects are alike throughout the general system, only greater where it makes its first impression; that its expulsive influence is nothing more than its poisonous effect on the mass of blood, partially divesting it of that vital principle so requisite to sustain the general circulation, and consequently rendering it inadequate to sustain the life of the child; hence the whole system is in agony, and all its efforts are convulsively exerted to resist the offending cause; and the tendency to dislodge the fœtus is in proportion to its mature development, and its dependance on the general circulation for existence. Should circumstances be propitious, delivery generally succeeds in a very

short time; but should there be a wrong presentation, or unusual resistance from other cause, the child is deprived of life by its vital sustenance being vitiated or withheld.

‘Against the position that the therapeutic phenomena of the ergot are wholly nervous, and that the change in the colour, quality, and circulation of the blood is to be attributed to this cause, I would urge, among the reasons already cited, its remarkable effect on the fœtus in the case above. It is irreconcilable to me, on this hypothesis, that the child should so speedily become veicated from this article through the medium of the nervous influence.

‘All the benefit resulting from its use in natural labour, is the saving of a little time. In cases of exhaustion from protracted natural labour, it has sometimes had a decidedly good effect; but in other instances of the same sort, it has evidently destroyed the child. In short, in my opinion, that the great value of the remedy is in controlling uterine hæmorrhage, but in child-birth, even although the rules governing its employment be observed, I am fearful its frequent ill effects will more than counterbalance its benefits.’—(*American Medical Review*.)

V. *On the Inflammation of the Blood-vessels which occurs in Variola.* By Dr. TANCHOU, Member of the Legion of Honour.

‘Among the numerous pathological alterations which are met with in the bodies of individuals to whom the small-pox has proved fatal, there are some very remarkable ones, which have escaped the few medical men who have undertaken these researches.

‘In fifty individuals dead of the small-pox, whom I have opened, I have found constantly a greater or less degree of inflammation on the internal surface of the heart, and of the arteries; twice only has it appeared to me so slight as to be called in doubt.

‘This inflammation develops itself in the form of plates or bands, in the direction of the length of the arteries; the vessels then become red, varying from rose colour to crimson red, even like blood itself. Their internal membrane is sometimes thickened.

‘Sometimes the inflammation occupies only the heart and the large arteries; at other times, it invades the smaller arterial branches, and penetrates even into the veins. In all these cases, the inflammation of the last-mentioned vessels has appeared to me merely consecutive, taking its origin from the cavities of the heart; for, so far from existing uniformly in the veins, I have never found it except in the principal and the larger veins, and always in those which are connected more immediately with the heart.

‘Arterial inflammation often seems to exist only in the internal membrane of these tubes. What proves this fact is, that, in lifting up this membrane, all trace of inflammation disappears. At other times, it occupies the whole thickness of their coats, and then they are as red without as they are red within. In all these cases, the

internal membrane is swelled, their coats are thickened, their diameter is diminished, and their friability increased.

‘The inflammation of the arteries has sometimes appeared to me stronger in the small than in the larger of these vessels. If this were proved, we should be led to suppose that the exhalant vessels, after having furnished the eruption in them, would be themselves inflamed; that they would communicate their inflammation to the small arteries, from thence to the larger, and so on, gradually, until the heart was affected; but that is a notion which I do not support. I shall, therefore, bring forward some facts, which, if they do not tend to confirm this view, are at least very remarkable. I have observed, that whenever the eruption, or the inflammation of the skin, was greater in one point, the arteries which distribute themselves upon this point were more or less exclusively inflamed. This morbid state has only terminated in the descending aorta; but the face being very much swelled, inflamed, and even excoriated, the carotids, and also the superior aortic system, have been found in the most decided inflammatory state. Another example might be given: I have found in an individual, whose pustules and crusts were confined to the face, the rest of the body being in a state of desquamation, the external carotid artery, the common carotid, the subclavian, the aorta, and the heart, only, inflamed; the inflammation had spared the other arteries; it had not reached the axillary artery; it did not even enter into the cranium along with the carotid artery.

‘Commonly, in individuals who die of diseases foreign to the character of the small-pox, we find the arteries empty, and small clots of blood and fibrine only in the heart, or in the aorta at farthest; but in variolous patients, on the contrary, I have almost always found small clots and fibrine, even in the smaller inflamed arteries; which would lead us to suppose, that the vessels had lost their contractility, by the very effect of the inflammation of their coats. This idea seems to me the more plausible, inasmuch as I have often remarked, that small clots of blood and of fibrine were more abundant, more voluminous, and larger, in proportion as their arterial coats were more inflamed. This fact deserves, in a particular manner, to be verified by anatomists; for if it were true, it would establish a real distinction between irritation and proper inflammation. I have always thought that it was the cessation of the action of capillary vessels,—the loss of their contractility,—their paralysis (if I may thus express myself), resulting from the inflammation of the coats themselves, which constitute *inflammation*. For as long as these vessels are not inflamed, as long as their action and contractility subsist, there is only irritation: the morbid cause ceasing, the tumefaction may be diminished, and the diseased part, as it appears to me, return to its natural state. But if the capillary vessels are themselves inflamed, their action is paralysed, the blood stagnates in the affected part; and if this fluid is not promptly removed by depletive medicines, or taken up by the

absorbents, these small vessels may become disorganised, and suppurate.

The state of the vessels which I have remarked in variolous patients, ought not to be confounded with a phenomenon incidental to the dead body or to imbibition; for, while I have met with it a few hours after death in individuals who were still very warm, I have also discovered arteries, under similar circumstances, differently coloured and differently modified. The inferior aortic artery, for instance, has often appeared to me diseased in that portion of it which is near the heart, while the other portion was sound: at other times, the superior aortic system, or one of its branches only, or its divisions, has appeared to me inflamed, while the other arteries, the other branches of this system, were in their natural state. I may report a case, where one of the carotids only, and the branches which distribute themselves on the face, were inflamed. If this state were a phenomenon peculiar to the dead body, why would it not be exhibited, at the same time, and during the same inspection, in all the arteries, or in the whole continuity of those which are similarly circumstanced? Why, in short, would it be exclusively found in the dead bodies of variolous patients?

I have even met with many other morbid alterations in individuals who have died of the small-pox; but none has appeared to me sufficiently constant, or sufficiently remarkable, to account for its fatality. The inflammation of the stomach and the intestines, although very frequent, is sometimes however wanting, or is nearly superficial: the brain is more frequently only injected, and the lungs are, in a manner, passively obstructed, rather than actually inflamed. Hence it is proper to remark, that, in variolous patients, all the tissues, and all the viscera, are very much injected. This is the necessary consequence of the nature of that inflammatory fever, truly angiotonic, which exists; but if we attach no importance to this injection, which is altogether remarkable, when we compare it with that produced by inflammation, we shall commit serious errors in the inferences which we deduce. In the digestive organs, for instance, this phenomenon, which is, in health, certainly most decided, by reason of the highly vascular nature of their tissues, becomes still farther augmented by the action of physical laws after death. I have very often found these viscera particularly injected in the most depending portion of them, and in the convexity of the arch which the intestines form with the mesentery; we cannot doubt but that this state was a cadaveric effect; for I have not only found it more decidedly marked in proportion to the length of time which the individual has ceased to exist; but I have also made it to vary at pleasure, by merely giving to dead subjects different positions, for a longer or shorter time after death. This injection is sometimes carried so far along the continuity of the limbs, that I have found collections of blood effused about the veins; a result probably arising from the tearing or the rupture of these vessels. It is perhaps the same morbid state of the lungs which has im-

posed on practitioners, who, in some variolous patients, have published an account of the gangrene of this organ. I do not deny but that inflammation, particularly of an organ, may occasion the death of individuals affected with small-pox; but I insist upon the difference which I have explained, as a very important one to be made. I have also found in variolous subjects the glands surrounding the larger cavities inflamed, and even in a state of suppuration. But of what importance can this morbid alteration be to life in general?

‘ But a very important question is left for us to solve. Do the individuals to whom the small-pox is fatal, die of inflammation, or of the general over-excitement of the viscera; or of the inflammation of some one organ in particular; or, lastly, is the fatality induced by the inflammation of the heart and arteries? I believe these three kinds of death possible, particularly because there is sometimes a failure in the *carotiditis* and the *arteritis*, or they are only very slight, and because we do not otherwise know to what degree these affections are mortal. But if we consider, however, the frequency of this morbid alteration, the importance of the organ which it affects; and when we afterwards compare it, on account of its consequences, with the inflammation of veins, we shall be induced to think, *that, at the same time that the inflammation of the heart and the arteries is a very fatal affection, it ought to be likewise regarded in variola as the most frequent and the most powerful cause of death.*

‘ I shall now add a few words for the use of the practitioner. It has always appeared to me possible to detect, during the life of the patient, the inflammation of the heart and of the arteries. The uneasiness and anxiety which he suffers are inexpressible; the burning heat within, which consumes him, does not permit him to rest in one place; the pulse, moreover, leaves no doubt about this point; it is unequal, irregular, often beating differently in different parts of the body, and not synchronous with the motions of the heart. It seems that these organs are differently affected by separating the stimulus which disturbs them. This state yields very readily to blood-letting; but if it does not yield, or if it is reproduced notwithstanding detraction of blood, the patient is lost.

‘ Another remark is, that in variolous patients, the leeches bleed for a long time, and the punctures they make have a great tendency to reopen. I have seen some of them on the fourth day still furnish blood. The first fact was easy to anticipate, owing to the particular state of the skin. But would not the second be explained, by the disposition which the vessels have, in this affection, to be inflamed?

‘ Another remark, no less practical, is, that bleeding, which in general has appeared to me useful, and attended with success, rarely succeeds when faintings supervene. Are leeches here contra-indicated, or is that treatment suitable to the importance of the case? I do not know; but a circumstance worthy of remark

is, that, notwithstanding faintings, the blood continues to flow, and that, precisely in this stage, it is with the greatest difficulty stopped.

'I believe I have remarked, that, when an inflammation of the vessels proves fatal to individuals attacked with variola, it is commonly in the period of invasion (the eruption of the pustules not being effected), or in the period of suppuration. It seems, then, that the inflammation is repelled from the skin towards the exhalants of the heart. I know that inflammation of one, or several viscera, may arrest the eruption, or that these viscera may be inflamed under the influence of the inflammation of the skin in the period of suppuration; but I will say, that these cases are not the most common, since it is particularly in the period of invasion, and of suppuration, that the vascular system is most in action. Death, by inflammation of some viscus, takes place often when the eruption is completed: there is at that time a true metastasis, the pustules disappear or dry up, the skin becomes contracted and pale; but when dissolution ensues from vascular inflammation, the softness of the skin continues, and the pustules scarcely shrink, if they shrink at all.'—(*Edin. Journ. of Med. Science for July.*)

VI. *Case of Disease of the Spinal Marrow, shewing the Isolation of the Functions of the Sensitive and Motive Nervous Roots* (*l'Isolément des Fonctions des Racines Sensitives et Motrices des Nerfs*). By M. VELPEAU.

'MADAME MARTIN, widow, aged thirty-six, a native of Paris, of ordinary stature, and nervous lymphatic temperament, had been affected with what was considered a nervous complaint at the age of twenty-seven: from that time up to the age of thirty-four she enjoyed good health; at which period she suffered much mental uneasiness, and, as she gained her livelihood by working at her needle, was often obliged to prolong her labours far into the night, residing also in a low, damp situation. She now often had a sensation of cold falling upon her loins, and occasionally experienced some convulsive motions. A little time afterwards, her left arm became affected with violent pain, which was only relieved by anodynes: pain of head, and suppressed menses, followed; the pain of the arm became more intense, and the motion of the limb was gradually lost: the lower extremities were affected with convulsions, and complete paralysis followed. Her state, when she was admitted at Saint-Côme, was as follows:—countenance calm and natural; intellectual faculties perfect. She made no complaint; had very little pain in her left arm, but could not move it, its sensibility was yet scarcely affected; the right arm could be moved, though with difficulty, and was the seat of severe pain. Little appetite or thirst; the tongue slightly red; respiration feeble, but not difficult; pulse frequent—sometimes of tolerable strength—but generally small and regular. There was a large and deep eschar on the sacrum: the lower extremities were anasarcaous; the lower half of

the chest, and all the organs beneath, dependant on the influence of the will, had completely lost sensation and motion. But the patient often complained of radiating or darting sensations (*irradiations*) in the abdomen, which produced a very unpleasant sensation of coldness. The fæces and urine were discharged unconsciously. Still, however, the patient seemed to have no idea of the serious character of her malady; and her mind was perfectly calm. We need not particularise the treatment, which, with the exception of two blisters to the spine, was entirely temporising. The sacral eschar spread widely, without causing the least pain. The motion of the right arm was gradually lost; but the patient complained of pain in it three days before her death, and when it was pinched, or pricked with pins, she cried out loudly. The left arm became almost without sensation; and, after two months' residence in the hospital, the patient died very calmly.

Examination on the second day after Death.—The lower extremities were anasarcaous; the brain firm and healthy. The spinal canal, when first seen from behind, appeared to be without lesion; but when the dura mater was laid open, numerous little whitish, opaline patches were seen on the three lower fourths of the spinal arachnoid: their diameter was from three to four lines, and at first sight they seemed nothing more than particles of soap which had been suspended in the water employed to wash the spine: their thickness was not more than a quarter of a line; and, with the exception of a few very small ones, they were confined to the posterior half of the canal. Their spinal surface was rugous and uneven, the other smooth and polished, and they became less numerous and less congregated in the upper part of the spine. None of them adhered to the spinal marrow, or to the pia mater; but they floated on the arachnoid, which membrane was transparent throughout; and the parts surrounding them appeared quite healthy. The spinal marrow itself had a healthy appearance; but was perhaps a little firmer than natural throughout its whole length: its membranes were in no degree thickened, and the white, cartilaginous-looking patches appeared to be formed in the thickness of the arachnoid, or rather were patched on the surface towards the spinal marrow. All the posterior roots of the nerves were distinct and unaltered.

Such were the appearances when the posterior part only of the spinal canal was examined; but when the spinal marrow was raised, an accidental production was discovered in the upper part of the dorsal region, covering the whole anterior face of the medullary cord, from the sixth cervical to the third dorsal pair of nerves. The colour of this production was a reddish-yellow, or rusty: it was placed between the spinal marrow and the arachnoid, so as to press strongly on the former, to which it appeared to be intimately united. There was no trace of the proper membrane of the spinal cord. This excrescence was flattened, thicker in the left portion than in the right, and might be turned from the right to the left side as far as the left anterior lateral groove, from which it appeared particularly to derive its origin, and where the roots of the cor-

responding nerves could no longer be distinguished: the posterior roots on this side were yet visible, though evidently altered; the anterior roots were so compressed as to be no more than threads; the posterior ones in the natural state. In short, the spinal marrow was strongly flattened by this species of fungus, and particularly on the left side. The texture of this body seemed cerebriiform, its free surface uneven, and lightly folded; and, with the exception of its rusty colour, and its irregular and flattened shape, it sufficiently well represented the external aspect of the medulla yet covered by its proper membrane: its tissue was not fibrous, or cartilaginous, or tuberculous, or scirrhus; but it was a yellowish-white substance, in which blood-vessels and cellular filaments were visible. The rest of the spinal marrow was healthy. The caries of the sacrum had no connexion with the interior of the spinal canal. The other organs presented nothing remarkable.—(*Journal de Physiologie, Avril.*)

VII. Case of Polyphagia.

THE Nouvelle Bibliothèque Médicale for June contains the narration, by M. Beaude, of a case of polyphagia, or indiscriminate swallowing, not apparently connected with an inordinate craving for food, and not dependent on any original depravation of the sensibility of the stomach; but the result in the first instance of chance, and subsequently of habit.

Jacques de Falaise, the subject of this affection, was employed in the quarries at Montmartre, and although a man of robust health and considerable muscular strength, had never signalled himself by his appetite up to the age of sixty-two years, when his new faculty was first developed. Having had a fatiguing day, and being at supper with his fellow-workmen, their admiration was excited by the singular rapidity with which he caused repeated bumpers of some kind of drink which is not specified to disappear; and one of them told him jestingly, that he seemed as if he could swallow the canary-bird which was in a cage near them, and the property of the landlady of the inn. Strange to say, the man determined to try whether he could or not; and, in spite of the tears and entreaties of the landlady, he put the poor canary-bird into his mouth and swallowed him, feathers and all, in a moment, to the great astonishment of the whole company, himself included; for he told them he had no expectation of being able to swallow the bird, and was quite surprised to find it go down so easily. This feat was only the precursor of many similar ones, to the great terror of the birds about Montmartre. The labourers soon spread the fame of the exploits of poor Jacques de Falaise, and the consequence was an overture from a manager of one of the little Parisian theatres, (a description of persons always on the watch for novelty, no matter of what kind,) and the result was an agreement for five years, during which time Jacques was to receive 400 francs a year, with food and clothing, and to swallow in public every thing that was given to him. In his public career he swallowed birds, and cards, and

flowers, and money: he was one day announced to swallow three hundred francs in five-franc pieces, a coin, as many of our readers well know, as large as an English crown-piece; but as the manager had agreed, that whatever Jacques swallowed was to become *his property*, he was not indulged with more than 150; after which the manager told the audience, that if they wished to see him swallow any more, they must contribute them: about twenty more pieces were thrown on the stage, and quickly followed the rest into the performer's stomach; where their weight, and propensity to roll about, caused such distress to the poor fellow, that he was obliged to wear a bandage tight round him until the whole sum had fairly passed through the intestinal canal. After this, he frequently swallowed frogs, crabs, eels, and even snakes; the crabs and eels, however, we are told, caused him particular inconvenience by their subsequent movements; and, on one occasion, an eel, which disapproved exceedingly of the unceremonious disposal of him, found his way back up the œsophagus, whilst poor Jacques was on the stage, and caused extreme pain by endeavouring to find a way through the posterior nares: at last the eel put its head rather near the performer's teeth, upon which Jacques crushed it, and swallowed him again: after this unpleasant accident, he adopted the habit of crushing the heads of all the animals he swallowed, by a very rapid application of his molar teeth.

We are not surprised to learn, that after pursuing this business for some time, Jacques de Falaise became affected with *gastro-enteritis*: he was admitted into the hospital Beaujou, and remained there some months. On being discharged, he returned to his trade of swallowing; but was soon more severely affected than before,—was re-admitted into the hospital, and had a long and painful convalescence. He now listened to the advice of his physicians, and, renouncing his dangerous avocation, was afterwards employed about the hospital until his death. He recovered his health and strength, but not his spirits; and at last, after spending a night in drinking, hanged himself.

The relater of this curious case has endeavoured to make it serviceable, not only with a view to the habits of the individual, but also to the mode of his death. With respect to the appearances after death, as connected with the swallowing propensity, not much was found worthy of observation. The pharynx was ample; the œsophagus of large size, and capable of great distension from numerous longitudinal rugæ; its inner surface was white and shining, and at its junction with the cardia there were three isolated tubercles, having pedicles; they were of the same colour as the lining membrane of the œsophagus, and appeared to be the result of a mucous vegetation, analogous to the cutaneous excrescences of the skin. The stomach was distended, its muscular structure much developed, and the pyloric orifice of unusual size. The mucous membrane of the ileum was partially destroyed; and there were large and numerous cicatrices, the remains of former ulcers, in that of the cœcum; the colon and rectum presented nothing remarkable.

In these appearances nothing occurred but what might be considered the *effects* of the habits of the individual, and these were perhaps less marked than there was reason to expect, or at least shewed that the gastric mucous membrane will submit quietly to more irritation than certain pathologists are ready to allow. As regards the bearing of the case on medical jurisprudence, we do not consider it as deserving particular notice; the following corollaries conclude this part of the case, and also comprehend the writer's view of the morbid appearances already mentioned,—who deduces from the case and dissection :

1st. That by habit alone, without any peculiarity of conformation, substances of considerable volume, and naturally quite repugnant to the stomach, may be swallowed and retained.

2d. That substances considered dangerous from their shape, weight, or nature, may remain in the stomach without exciting inflammation so readily as would be expected; and consequently, that the susceptibility of the stomach to impressions of this kind has been exaggerated.

3d. That in certain cases, as a result of being strongly and constantly called into action, the muscular tunic of the stomach, like other muscular structure, may acquire strength and development; that from prolonged local irritation vegetations may be formed in the mucous membrane of the œsophagus; and that ulcerations of the digestive organs are less serious than they have been considered, and are capable of cicatrization.'

VIII. Digestion.

MM. LEURET and LASSAIGNE, in their very interesting and valuable experimental essay on this subject, have met with many curious results.

They found no remarkable difference in the saliva of carnivorous and herbivorous animals. The purest saliva was obtained for their experiments directly from the parotid duct, in man, the horse, and dog. The composition was as follows:—

Water, 99 parts; mucus, traces; albumen, soda, chloride of sodium, chloride of potassium, carbonate of lime, and phosphate of lime, 1 part. Total 100.

Their experiments on the bile confirmed the results of Thénard and Chevreuil.

The pancreatic juice is of the specific gravity 1.0026; at 15° of the thermometer: (centigrade, we presume.) Its composition is:—

Water, 99.1 parts; animal matter soluble in alcohol, animal matter soluble in water, traces of albumen, mucus, soda, chloride of sodium, chloride of potassium, and phosphate of lime, 0.9 parts. Total, 100. This greatly confirms the analogy long observed between the pancreatic liquor and the saliva.

In the *gastric liquor* there are:—

Water, 98 parts; *lactic acid*, muriate of ammonia, chloride of

sodium, animal matter soluble in water, mucus, and phosphate of lime, 2 parts. Total, 100.

Dr. Prout and Mr. Children have announced the gastric acid, of which so much has been said, to be the muriatic; while M. Chevreuil had stated it to be the lactic. MM. Leuret and Lassaigne confirm the results of Chevreuil, and that with great confidence in their own accuracy. They found the contents of all the four stomachs of ruminating animals acid. MM. Prevost and Leroyer had stated those of the three first to be alkaline. The observations of Leuret and Lassaigne agree with those of Montegre (vide Dict. des Sci. Med.), who believes digestion to produce acidity, as a result of the regular process.

The *feces* become alkaline.

Substances which contain no azote, from whatever class they are obtained, cannot serve for nutrition. We cannot understand this, especially when compared with what follows. "If, on the contrary, they are soluble, one part is absorbed, and another is expelled, either by urine, or by the anus; such are sugar, gum, &c." This seems to us like a contradiction.

It is impossible, in the present state of science, to determine the chemical change which aliments undergo in the digestive organs, both on account of their mixture, and the insufficiency of our means of analysis.

"The absorption of chyle takes place by the villi." "These communicate directly with the lacteals and the vena portæ."

"The transference of the chyle takes place by the lacteals; nevertheless, if they are obliterated, this may be done through the vena portæ."

The section of the pneumo-gastric nerves does not stop the distention of aliments in the stomach, or chylicification.

The juices secreted by the liver and pancreas are poured into the intestines in greater quantity during digestion than at any other period, in consequence of the contact of the acid chyme with the biliary and pancreatic orifices.

The pancreatic juice is analogous to the saliva.

The spleen is an appendage to the liver; it swells during the absorption of liquids by the vena portæ.

Liquid aliments are digested, just as much as solid; but they do not require so great a quantity of gastric and intestinal juices.

Watery drinks are absorbed in the stomach and intestines by the radicles of the vena portæ. Spirituous drinks occasion an efflux of the gastric juices, become acid, and are absorbed.

Excrements owe their colour and odour to the bile, and their consistence to the absorption of a portion of the water they contain. They carry off a large amount of the nutriment.

Great obscurity still remains as to the cause of hunger.

Thirst is thought to be produced by the drying which the pharynx undergoes, from the passage through it of the air used in respiration, and at a time when the supply of mucous fluid is scanty.

'Our readers will have perceived long ere this, that here are several propositions at war, not only with our received opinions, but with the experimental researches of some others among the modern physiologists. We do not know what Dr. Wilson Philip would say to his observations being so cavalierly dismissed: they seem scarcely to condescend to mention his name in France. Not having the original, we could do no better than translate, almost literally, the conclusions of these experimenters, as stated in the Bulletin; and the result of this is what we have just given our readers. From the words "the absorption of chyle," to the end, is nearly verbatim the language of the review.'—(*North American Med. and Sur. Journ. for July.*)

IX. Essential Oil of Male Fern, as a remedy in Cases of Tænia.

'THE male fern has long been regarded as a valuable anthelmintic medicine; but, as every powder administered in large doses, its exhibition is difficult and disagreeable; so much so, indeed, that many patients refuse to make a sufficiently constant use of it to insure its beneficial effects. Struck with this inconvenience, M. Perchier, a pharmacist of Geneva, has lately made some experiments with a view of discovering its active principle, and to see whether this latter may be administered with equal success with the powder or infusion of the plant. We are happy to learn that the results of his experiments are very satisfactory. We translate the following observations from a memoir on the subject, read on the 7th of October last, by Mr. Gendrin, before the medical society of the department of the Seine:—

' "This medicine, which is a fatty oil extracted by distillation from the æther, in which the powder of the root of the male fern has been macerated, has caused, in many cases, the expulsion of the tænia, without occasioning nausea, colics, or any other morbid phenomena.

' "It is exhibited at bed-time, either in an oily potion, in pills, or incorporated in an electuary, in doses of 18 or 20 drops. On the following morning, a similar dose is given; and two hours after, two ounces of castor oil are administered. In most cases, the tænia is expelled in the course of the day; but if this does not occur, the same doses of the oil are given in the same way, and followed by a similar quantity of the castor oil. The fatty oil of fern has an ethereal and empyreumatic smell: its colour is brown, and its consistence rather greater than that of castor oil; it is, however, easier to separate in drops. Its taste is acrid, pungent, empyreumatic, and very disagreeable."—(*Propagateur des Sciences Médicales, Janvier 1826.*)

X. Digitalis.

'We find in the *Propagateur des Sciences Médicales* for February 1826, an account of the directions of Dr. Neumann, of Berlin, for the employment of digitalis in pulmonic diseases: they are said to

be the result of long experience. Digitalis is useless, says the writer, in all cases of suppuration of the lung, consequent to tubercles of that organ. It is of no avail in those suppurations which succeed inflammatory hæmoptysis. It is employed without success in local phlegmorrhagies of the lungs; but it almost invariably cures those chronic catarrhs which depend on a state of erethism of the mucous lining of the bronchiæ. This disease is sometimes called chronic bronchitis, sometimes mucous consumption, pulmonic catarrh, and galloping consumption. If the diagnosis in this case be well made out, hopes may be entertained of a cure,—one of the two following conditions being present :

‘ 1. The patient must be susceptible of the stimulant action of the remedy : this is often not the case. We may be sure the digitalis will not produce its effect, where the pulse of the patient remains *uniform and frequent after he has taken it for several days*. It does not suit such persons.

‘ 2. The medicine ought to be administered in a proper manner. To be good, the leaves, even in the dried state, should be perfectly green, and free from any brown spots. Two ounces of the leaves should be infused in six ounces of boiling water, and the patient may take a table-spoonful every hour, until he feels nausea, or a sense of constriction in his throat, or flashing of the eyes, or irregular pulse. The use of the foxglove should then be interrupted for seven or eight days, in which interval the full action of the medicine is developed, the pulse remaining irregular, and the mucous secretion diminishing gradually. If the first trial does not remove it entirely, a second course may be commenced after a few days.’

XI. Aneurism from a Wound, cured by Valsalva's Method.

‘ THIS interesting and valuable case is condensed from *Le Propagateur des Sciences Médicales* for March 1826. M. Antouard, a healthy female, aged eighteen, was wounded on the 18th of June, 1825, by a poniard, in the left carotid artery, below the superior extremity of the sternum, the instrument passing obliquely inwards and downwards. The anterior and lateral portions of the neck were enormously distended with blood, and syncope supervened. Four days after the injury was received, an aneurismal tumour was observed at the edge of the sternum, the surrounding effusion being greatly diminished by absorption; and at the expiration of a month, when she was first seen by Dr. Souchier, it was of the size of the two fists of the young female. The pulsations at this time were nearly equal over the whole surface of the tumour; but rather more distinct over the orifice in the vessel. The surrounding blood was entirely absorbed. No pain was experienced, unless from the pressure of the swelling; from which cause, also, resulted a troublesome and continued headach. Dr. Souchier not believing an operation advisable during the warm season of the year, and on a tumour situated so much under the sternum, determined to fulfil the following indications: 1st. To lessen the quantity of blood, and thus

to diminish the stimulus to the heart, the projectile force it exercises, and consequently, the rapidity with which the blood escaped from the ruptured vessel, and the impulse hence imparted to the sides of the tumour, preventing, in some degree, the coagulation of the blood. 2d. To increase the effect of general and local bleeding by the use of *cold*, of *pressure*, and especially of the *digitalis purpurea*; that thus the force of the circulation may be lessened, the blood allowed to coagulate, and a radical cure be accomplished.

‘Mademoiselle Antouard, determined to yield herself to this plan, and was directed: 1st. Rice-water, acidulated with lemon-juice, and an infusion of mallows, for *food* and *drink*. 2d. To employ frictions on the abdomen, and on the insides of the thighs, morning and evening, with eight grains of the pulverised leaves of *digitalis*, previously macerated for twenty-four hours in a sufficient quantity of saliva. 3d. To apply every day twelve leeches near the aneurismal tumour; and after favouring the flow of blood by emollient fomentations, to cover the part with compresses, wet with a saturated solution of the acetate of lead, to be frequently renewed, so as to be kept below the temperature of the skin. 4th. The effect of these means to be augmented by pressure, made by means of the base of a glass tumbler, fixed by the hands of assistants; and, 5th. To be kept at rest, and in perfect silence.

‘*Fourth day of treatment*, being 2d of Aug. 1825.—Pulsations more central; tumour very sensibly diminished; pulse less strong, and reduced from 86 to 74 in the minute; the *menses*, which had been suppressed for two months, appeared on the 31st ult., and still flow. *Prescription*, V. S. \mathfrak{Z} xvii. next day, twelve leeches on the lateral parts of the tumour; gr. xxiv. of *digitalis*, in three applications through the day. Cont. ut supra.

‘Aug. 8th.—Patient tranquil; pulse 60, full, not active; face not flushed, but preserving a delicate tinge of red; headach now slight; no nausea; menses continued until the 6th inst. *Prescription*, V. S. \mathfrak{Z} xij.—fifteen leeches to-morrow; increase *digitalis* to gr. xxviii. daily; the rest ut supra. The tumour has diminished at least one-fourth.

‘Aug. 12th.—Tumour reduced to three-fifths of its former volume; pulse at 56; her nights are comfortable; has some headach, and lately, cardialgia; complains of hunger and weakness, and from the fatigue of her assistants, the pressure was made with a bandage less effectually than before. This was allowed, as the pulsations are weakened, and more and more central, while the elevation of the tumour is trifling. For fear her health might be injured, she was permitted to rise a little from bed, and to add to her rice-water some light jellies (*crèmes*) made from the same grain. V. S. \mathfrak{Z} x., and every second day eight leeches around the tumour; *digitalis* increased to 32 grains daily; warm pediluvium for one hour, morning and evening; silence as complete as possible.

‘Aug. 18th.—No tumour visible; pulsations can yet be felt; the skin is thickened; pulse at the wrist is at 50. V. S. \mathfrak{Z} vii:—

six leeches every fourth day until menstrual period; digitalis reduced to gr. xx., and still to the same parts; continue the pressure; allow some rice jelly, vermicelli soup, gentle exercise; silence to be preserved, continue pediluvium, and relieve constipation by simple enemata.

In fifteen days, Dr. Souchier again visited his patient. It required an experienced hand to distinguish, at the spot where the artery was cicatrised, an elevation rather more evident than over the rest of the artery. Pulse 48 per minute; hunger great, and the remedies now unpleasant. Most of them were suspended, and fruit, and the white flesh of poultry, added to her diet list. The digitalis reduced to 12 grains a day. Compression, silence, and moderate exercise, to be continued as before. The menses appeared at the expiration of twenty-five days, and were more abundant than at the last period.

At the end of a month no trace of the tumour was discoverable. The young lady had carefully increased her nutriment and exercise without inconvenience, and all remedial measures were now omitted.

During the months of December and January last, she remained free from any inconvenience from the tumour; and the union of the parietes of the artery was therefore regarded as complete.

In the above account, we have only to regret that the state of the artery above the tumour, before and after the treatment, had not been noticed. Perhaps this may be supplied by Dr. Souchier, in the commentary, which he proposes publishing on the above case.

XII. *Case of Lumbago and Sciatica, treated by Moxa.* By MR. BOYLE.*

On the 28th of June last, I was requested by Mr. Allan, of Leicester Square, to see Francis Hill, a wine porter, aged thirty-three, labouring under *lumbago* and *sciatica*.

The patient's description was, that between six and seven months previously, whilst suffering from a slight attack of rheumatism, and in the act of carrying a heavy hamper of wine, he was suddenly seized with excruciating pain in the loins, obliging him to call for assistance to free him of his burthen, and conduct him home. Since the above period, up to the time of my first seeing him, he had never been quite free of pains in the loins and limbs; but his sufferings had so fluctuated as to enable him to follow some light employment for a few successive days at a time. He had taken various medicines; but had not undergone any regular system of treatment till he consigned his case to the care of Mr. Allan, who had now judiciously made trial of most of the approved remedies. After preparing his patient by alteratives, Mr. A. gave calomel and opium in combination, by which the mouth was affected, and a violent pain, which had been experienced for some time in the

* See a Treatise on the Modified Application of Moxa. 2d edit. 1826.

region of the left kidney, was removed. Recourse was next had to colchicum, combined with opium, and, lastly, with hyoscyamus; leeching, cupping, blistering, and abstinence, having been each also regularly employed. The general affection, however, remained unsubdued. The pains, which appeared to commence at the fourth lumbar vertebra, passed on either side of the sacrum, and extended in the direct course of the nerves derived from the above parts to the *crista of the ilia*, and to the groins, affected, in a still more violent degree, the great ischiatic, particularly in its passage behind the trochanter major, and between the ham-strings, and rendered motion in the leg and thigh most distressing,—drawing on the stocking, or tying the shoe, was quite impossible. The tongue was dry, but very little furred; the bowels were, and had been kept regular, and the circulation was but little excited; the countenance, however, was expressive of much pain and suffering. Six *moxa* cylinders were applied over the origin of the nerves, in whose course pain was experienced, and this had the immediate effect of greatly relieving the patient, he being now enabled to stoop and bend in various directions. A piece of oiled silk was placed over the part to which the *moxa* had been applied, and all medicine was discontinued.

‘ 29th.—Had been comparatively free of pain all day yesterday; a slight return in the night, but not so diffuse or severe; this morning he complains chiefly of the left hip and ham; in addition to the loins, therefore, the *moxa* was applied behind the trochanter major, drawing the gluteous maximus as far back as possible, and also over the track of the ischiatic nerve, between the ham-strings, attended with a similar emancipation from pain.

‘ 30th.—Had a better night, and is much relieved, though not altogether free from pain.

‘ 1st of July.—The pains are now quite removed during the application of *moxa*, returning occasionally, and remaining a short time only; the seat of suffering is also less uniform.

‘ From this time *moxa* was applied every morning to the parts in which pain was experienced; his daily improvement was regular from the first; and on the ninth following he was quite well. Small and frequently repeated doses of bark and soda were prescribed by Mr. Allan, to prevent a relapse.

‘ It is worthy of being stated, that each application of the *moxa* was attended with a most profuse perspiration; indeed, this is a general effect of the remedy.

XIII. *Observations on a peculiar Catarrhal Complaint in Children.*

By JOSEPH PARRISH, M.D., Surgeon to the Pennsylvania Hospital.

‘ This disease bore a strong resemblance to ordinary catarrh, but was attended with a pulse of rather more frequency than natural, in most instances feeble, with shrunk countenance, cold cheeks, and great debility: it was, in fact, a typhous catarrh. The dyspnoea is considerable, irregular in its accession, and appears to be spas-

modic. It was treated successfully by antispasmodics and expectorants; assafoetida and ol. succini, the remedies most relied on, were given every two hours, with decoction of senega in the intervening hour, pushed so far as to produce vomiting, if the symptoms were urgent. The volatile alkali was also used. These remedies, with purges, and blisters to the breast, and the warm bath, with the fumes of rosin inhaled by the patient, constituted the treatment. Dr. Parrish relates several cases of this disease in children of the same family, in whom, under the care of other physicians, it had been fatal, by pursuing the antiphlogistic plan. The disposition to it appeared to be hereditary in this family; and to prevent its recurrence, the surviving child was confined in an atmosphere impregnated with the fumes of rosin, with good effect. The disease, however, after a time, appeared in this infant; all idea of inflammation in the case was abandoned, from the examination of one of the children who had died previously, and the treatment was conducted on the above principles. The inhalation of the fumes of rosin gave immediate ease, and the remedies administered on the above plan happily effected the cure. The rage for treating all diseases of children by bleeding, when the lungs and trachea are involved, from the alarm and rapid fatality of croup, renders these observations extremely valuable.—(*North Amer. Med. Journ.*)

SECTION III. — INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. *Farming of Parish Poor.*

WE are glad to perceive that this subject is receiving in some parts of the country very deserved attention.

At a meeting held in the committee room of the Eye and Ear infirmary of Southam, on Thursday the 6th of July, 1826, for the purpose of taking into consideration the present manner of supplying medical aid to paupers, and the more independent labouring and working classes—Sir Gray Skipwith, bart., in the chair—it was resolved:

‘ 1st. That the present system of farming the sick parochial poor is highly objectionable and improper, and that the best method of abolishing it appears to be to call the public attention to its effects.

‘ 2d. That in the opinion of this meeting, a frequent cause of pauperism is the expense incurred by the labouring and working classes in obtaining medical aid, and (without at present deciding upon any specific plan) that such cause might, in a great degree, be removed by mutual association, under proper regulations and restrictions.

‘ 3d. That for the purpose of collecting, by means of an extensive correspondence, such information as may fully enable them to make a general statement of the operation and effect of the present

mode of providing medical attendance on the parish poor, as well as of the cause of pauperism alluded to in the preceding resolution; and to report concerning the propriety and expediency of promoting alterations and amendment in these particulars; and to what extent such alterations and amendment may be effected;—the following gentlemen, viz.:—Sir Gray Skipwith, bart.; John Shuckburgh, esq.; William Holbech, esq.; Henry Thomas Chamberlayne, esq.; F. W. Dwarris, esq.; Charles Holte Bracebridge, esq.; the Rev. G. Chandler, D.D.; the Rev. C. Palmer; the Rev. J. J. Lowe; the Rev. H. W. Sitwell; the Rev. W. Churton; and P. F. Luard, M.D.; John Conolly, M.D.; Mr. Welchman, sen., Mr. S. Bucknell, Mr. R. Jones, Mr. H. L. Smith, members of the Royal College of Surgeons—do form a committee, with power to add to their numbers: and that the report to be made by them be submitted to a general meeting, to be hereafter called by advertisement.

4th. That Dr. Conolly be appointed honorary secretary of the above committee, and empowered to make arrangements for the proposed correspondence.

5th. That as considerable expense in printing, advertisements, &c., must necessarily be incurred, a subscription be opened for defraying the same; that Mr. Wright, of Southam, be appointed treasurer; and that the bankers at Warwick be requested to receive subscriptions.

G. SKIPWITH, *Chairman.*

The meetings of the committee will be held at the Warwick Arms hotel, Warwick. The first meeting of the committee is appointed to be held on Monday the 11th day of Sept. next.

J. CONOLLY, M.D., *Hon. Secretary.*

Stratford, July 20th, 1826.

II. *New Division of the Thermometer.*

THE difference observed at Melville island between the degrees of temperature indicated by the thermometers, when placed in the same circumstances on the ice, that were taken out by the North-west Expedition ships in 1820, has led Lieut. A. M. Skene, R.N. to endeavour to remedy this error. For this purpose he has invented a new division of the thermometrical scale, taking the fusion of two solid bodies instead of the evaporation and the freezing of a fluid, as has hitherto been done; for we cannot command at pleasure circumstances conducive to the evaporation of a fluid at a fixed degree of temperature,—whereas, on the contrary, the fusion of bodies is only determined by the affinity of their molecules, the one for the other, and for caloric, and depends on no other cause. Therefore, Mr. A. M. Skene assumes the difference of temperature between the fusion of ice and the fusion of frozen mercury, as a thermometrical *unity*, taking care that these bodies are perfectly pure: which unity he nominates a *degree*, and subdivides this degree into 100 *minutes* or parts, in imitation of the new division of the terrestrial circle. The fusion of ice will preserve the station it does with nearly all nations that make use

of thermometers, and will be designated by the sign 0; it will also divide heat from cold, which have as much two separate existences as any two sensations indicate, which are attended with the same natural phenomena. It is a curious circumstance, but one of no importance, that 360 degrees, which is the division of a circle, is also the greatest probable heat, using Mr. Skene's scale, according to Mr. Wedgwood's pyrometer.

From observing that the atmospheric heat ranges as much above zero when we approach the equator, as it ranges below zero when we approach the Poles, Mr. S. is induced to believe that there is the same extent or circle of cold of 360 degrees as there is of heat. The positive sense, or ascending the scale, will be marked by the sign +, whilst the negative sense, or descending the scale, will be designated by the sign —. This scale will have the advantage of indicating the temperatures of the fusion of bodies the least fusible by small numbers; it also is a decimal scale, therefore will be of use where figures are wanted or not. Between the fusion of ice and the boiling of water, there will be but 2.50, which may be indicated by $2.5 + 0$. Zinc melts at $9. + 0$; spermaceti melts at $1. + 0$; congealed mercury melts at $1. - 0$, &c. &c. These numbers will be more easily retained than those which are actually in use. It is true, that the graduating of thermometers will become more difficult, and cannot be confided but to artists instructed, or those who possess a standard thermometer; but far from there resulting any inconvenience, it will tend to do away with the multitude of badly divided and incorrect instruments, which never agree together in the same circumstances, and to which faith cannot be given, when observations of importance are required. These instruments, graduated according to the method of Mr. Skene, will necessarily be of accord in whatever place they may have been made.

G. R. S.

III. *Extirpation of an Ovarium.* By ALLAN G. SMITH, of Danville, Kentucky.

'In this case the ovary, which was scirrhus, was extracted by an incision from the umbilicus to the pubis; the tumour was removed, previously surrounding it with a ligature of silk. The wound was closed with the interrupted suture, and the ligatures came away by the twenty-fifth day; the woman gradually recovered.'—(*North Amer. Med. Journ.*)

Clinical Report of the most prevalent Diseases during the preceding Month.

AUGUST has been generally a hot and dry month, with the exception of some passing thunder storms. Rain, however, has fallen abundantly since the 20th; but the ground is yet scarcely moist.

In the early part of the month, affections of the head predominated greatly, and required very active antiphlogistic measures to arrest their progress. They were marked by the common symptoms of giddiness, pain, and noise in the ears, with a great tendency to numbness in the extremities. A few fatal cases of apoplexy

have occurred likewise this month ; in several instances, however, supervening to some other disease. Two instances have been mentioned to us, where it was the conclusion of chronic hepatitis ; and in a case under our care, it had followed an attack of cholera. In the former instances, death was almost instant ; in the latter, the patient lingered for three days, evidently in a dying state the whole time.

Slight febrile attacks have been very prevalent—so slight generally, as never to confine the patient to the bed, and seldom to the house ; but yet entirely preventing exertion. It has been characterised by great lassitude and loss of appetite, with a loaded tongue, and occasional shivering. Remedial measures seem very little to influence it ; but left to itself, it runs its course mildly and safely : the time required varying from a few days to three or four weeks. In a few examples the headach has been severe, and has been greatly relieved by venesection. We have commonly contented ourselves with attending to the bowels, and avoiding all stimulants, which have, when employed, been, in our experience, injurious.

A case of genuine ague has presented itself to us, in a part of the country where ague is scarcely known, and where there are no marshy lands. The patient was a child of seven years of age. He had had an attack while in Essex last year, but had been cured, and had left that county for several months. His health remained good till he was attacked by the measles ; since which time, now nearly six weeks, he has had a regular ague. We have succeeded several times in suspending the paroxysms ; but they have returned again. He is still under treatment.

Measles are still common, and the sequelæ very fatal. In every instance that has come under our notice, the evil consequences have been evidently derived from mismanagement. Wine and stimulating food had been given, almost while the eruptive fever was present.

Cholera, or rather diarrhoea, prevails to a considerable extent ; but with few fatal cases. We have scarcely indeed seen what we should term a severe case.

We would again call the attention of medical men to the employment of the liquor calcis muriatis in bronchocele. We have given it in several instances lately, with a decided and rapid diminution of the tumour. The dose is from thirty drops to two drachms, three or four times a day.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. Part Third of a Series of Elementary Lectures on the Veterinary Art ; wherein the Anatomy, Physiology, and Pathology of the Horse, are essayed on the General Principles of Medical Science. By William Percivall, Member of the Royal College of Surgeons in London ; Licentiate of the Society of Apothecaries ; and late Veterinary Surgeon of the Royal Artillery. 8vo. Pp. 502. Longmans. London, 1826.

2. Principles of Dental Surgery ; exhibiting a New Method of Treating the Diseases of the Teeth and Gums ; especially calculated to promote their Health and Beauty, accompanied by a General View of the present State of Dental Surgery, with occasional References to the more prevalent Abuses of the Art. In Two Parts. By Leonard Koecker, Surgeon-Dentist, Doctor

in Medicine and Surgery; Member of the Medical and Linnean Societies; and of the Academy of Natural Science of Philadelphia. 8vo. Pp. 460. Underwoods. London, 1826.

3. A Critical Inquiry into the Ancient and Modern Method of Curing Diseases in the Urethra and Bladder; and of the Successful Practice of Vesicæ Lotura for the Cure of Diseased Bladders. The whole illustrated by a variety of Cases. By Jesse Foot, Surgeon. Carefully Revised and Corrected, by Jesse Foot, junior, Member of the Royal College of Surgeons. Eighth edition. 8vo. Pp. 200. Highly. London, 1826.

4. A Treatise on a Modified Application of Moxa, in the Treatment of Stiff and Contracted Joints; and also in Chronic Rheumatism, Rheumatic Gout, Lumbago, Sciatica, Indolent Tumours, &c. &c. Illustrated by Cases and Plates; with Observations on the different Remedies hitherto employed in the Treatment of Diseased Joints; and an Investigation into the Nature, Causes, and Treatment, of Spinal Diseases. By James Boyle, Esq., Surgeon of the Middlesex Infirmary; Author of a "Treatise on the Epidemic Cholera of India;" of "Letters on the Prevention and Cure of Diseases peculiar to Hot and Cold Climates;" and of a "Treatise on Syphilis." Second edition. 8vo. Pp. 220. Callow and Wilson. London, 1826.

Quarterly Report of Prices of SUBSTANCES employed in PHARMACY.

| | s. | d. | | s. | d. |
|--|--------|----|-------------------------------------|--------------|----|
| Acaciæ Gummi elect. ....lb. | 3 | 4 | Coccus (Coccinella) | unc. | 2 |
| Acidum Citricum | 20 | 3 | Colocynthis Pulpa Turk. ....lb. | 5 | 6 |
| — Benzoinum | unc. | 3 | Copaiba | 5 | 0 |
| — Sulphuricum | P. lb. | 3 | Colchici Radix (sic) | 2 | 6 |
| — Muriaticum | 0 | 9 | Croci stigmata | unc. | 2 |
| — Nitricum | 2 | 6 | Cupri sulphas | lb. | 1 |
| — Aceticum Dilut. ....cong. | 4 | 6 | Cuprum ammoniatum | 8 | 3 |
| — Tartaricum | lb. | 5 | Cuspariæ Cortex | 3 | 3 |
| Alcohol | M. lb. | 3 | Confectio aromatica | 5 | 3 |
| — æther sulphuricus | 7 | 0 | — Aurantiorum | 2 | 6 |
| — rectificatus | 9 | 0 | — Cassiæ | lb | 6 |
| Aloes spicatæ extractum | lb. | 7 | — Opil. | 6 | 3 |
| — vulgaris extractum | 8 | 0 | — Piperis Nigri | lb. | 3 |
| Althææ Radix | 1 | 2 | — Rosæ caninæ | 1 | 8 |
| Alumen | 0 | 6 | — Rosæ gallicæ | 2 | 3 |
| Ammoniæ Murias | 1 | 8 | — Rutæ | unc. | 3 |
| — Subcarbonas | 2 | 0 | — Scammonie | unc. | 2 |
| Amygdalæ dulces | 3 | 6 | — Sennæ | 3 | 3 |
| Ammoniacum (Gutt.) | 7 | 0 | Emplastrum Ammon. c Hydrar. ....lb. | 6 | 6 |
| — (Lump.) | 3 | 6 | — Cantharidis | 6 | 0 |
| Anthemidis Flores | 3 | 3 | — Hydragryi | 3 | 3 |
| Antimonii oxydum Ver. | 6 | 3 | — Opil. | 3 | 8 |
| — sulphuretum præp. | 3 | 6 | — Resinæ | 1 | 8 |
| — sulphuretum præc. | unc. | 0 | — Saponis | 1 | 8 |
| Antimonium Tartarizatum | 3 | 4 | Extractum Aconiti | unc. | 3 |
| Arsenicum Alb. Sublim. ....lb. | 2 | 6 | — Anthemidis | lb. | 7 |
| Assafoetidæ Gummi-resina | lb. | 4 | — Belladonnæ | unc. | 1 |
| Aurantii Cortex | 2 | 0 | — Cinchonæ | 3 | 3 |
| Argentii Nitras | unc. | 5 | — Cinchonæ resinosa | 4 | 6 |
| Balsamum Peruvianum | lb. | 15 | — Colocynthis | 1 | 6 |
| — Tolutanum | 30 | 0 | — Colocynthis comp. | 4 | 9 |
| Benzoinum elect. | 8 | 6 | — Conii | 3 | 6 |
| Bismuthi Subnitras | unc. | 1 | — Elaterii | 35 | 3 |
| Calamina præparata | 0 | 6 | — Gentianæ | 3 | 4 |
| Calciæ Murias | unc. | 0 | — Glycyrrhizæ | lb. | 7 |
| — Muriatis solutio | lb. | 1 | — Hæmatoxyli | unc. | 3 |
| Calumbæ | lb. | 5 | — Humuli | 1 | 6 |
| Cambogia | 7 | 6 | — Hyocyami | 1 | 3 |
| Camphora | 4 | 9 | — Jalapæ | Is. 6d. Res. | 3 |
| Canellæ Cortex elect. | 2 | 6 | — Lactucæ Sativæ | unc. | 1 |
| Cantharis | lb. | 12 | — Virosæ | unc. | 1 |
| Cardamomi Semina | lb. | 8 | — Opil. | 4 | 6 |
| Cascarillæ Cortex elect. | 1 | 6 | — Papaveris | 3 | 9 |
| Castoreum | unc. | 3 | — Rheii | 2 | 3 |
| Castor Russ. | oz. | 15 | — Sarsaparillæ | 2 | 3 |
| Catechu Extractum | lb. | 1 | — Stramonii Sem. | unc. | 6 |
| Cetaceum | 3 | 3 | — Taraxaci | 8 | 6 |
| Cera alba | 3 | 4 | Ferri subcarbonas præcip. ....lb. | 3 | 4 |
| — flava | 3 | 3 | — sulphas | 1 | 0 |
| Cinchonæ cordifoliæ Cortex (yellow) .. | 10 | 6 | Ferrum ammoniatum | 3 | 3 |
| — lancifoliæ Cortex (quilled) .. | 7 | 6 | — tartarizatum | 3 | 9 |
| — oblongifoliæ Cortex (red) .. | 9 | 0 | Gambai Gummi-resina | 7 | 6 |
| Cinnamomi Cortex | 14 | 3 | Gentianæ Radix elect. | 1 | 3 |

| | s. d. | | s. d. |
|---------------------------|------------------|------------------------------|------------|
| Guaiaci resina | 7 6 | Potasse Subcarbonas | 1 4 |
| Hydrargyrum purificatum | 4 3 | — Sulphas | 1 3 |
| — precipitatum album | 8 3 | — Sulphuretum | 3 0 |
| — cum creta | 3 3 | — Supersulphas | 2 0 |
| Hydrargyri Oxymurias | unc. 0 9 | — Tartras | 2 4 |
| — Submurias | P. lb. 6 6 | — Supertartras | 1 9 |
| — Nitrico-Oxydum | 0 6 | Pilule Hydrargyri | unc. 0 6 |
| — Oxydum Cifereum | 1 8 | Pulvis Antimonialis | 0 6 |
| — Oxydum rubrum | 4 0 | — Cinnamomi compos. | unc. 0 0 |
| — Sulphuretum nigrum | 0 4 | — Contrayerva comp. | unc. 0 0 |
| — — rubrum | 2 6 | — Ipecacuanhe compos. | unc. 0 0 |
| Hellebori nigri Radix | lb. 16 6 | — Scammonie compos. | unc. 3 8 |
| Ipecacuanhe Radix | 19 3 | — Tragacanthæ comp. | 0 6 |
| — Pulvis | 6 3 | Resina Plava | lb. 0 4 |
| Jalapæ Radix | 7 3 | Rhei Radix (Ruata) | 28 6 |
| — Pulvis | 7 3 | — (East India) opt. | 13 9 |
| Kino | 7 3 | Rosæ petala | 10 6 |
| Liquor Plumbi subacetatis | P. lb. 0 8 | Sapo (Spanish) | 2 3 |
| — Ammonia | 1 0 2 6 | Sarsaparillæ Radix (Jam.) | 6 6 |
| — Arsenicallis | 1 3 | Scammonie Gummi-Resina | unc. 3 6 |
| — Potasse | 1 0 | Scillæ Radix siccata | lb. 1 6 |
| Linimentum Æruginis | lb. 3 0 | Senegæ Radix | 3 6 |
| — Camphoræ comp. | 5 6 | Sennæ Folia | 5 0 6 9 |
| — Saponis comp. | 4 3 | Serpentariæ Radix | 4 6 |
| Lichen | 2 6 | Simaroubæ Cortex | 3 6 |
| Magnesia | 7 3 | Sodæ subboras | 2 0 |
| Magnesie Subcarbonas | 2 6 | — Sulphas | 4 0 |
| — Sulphas | 0 6 | — Carbonas | 1 3 |
| Mentha communis | 6 3 | — Subcarbonas | 3 3 |
| Moschus pod. (32s.) | in gr. unc. 46 3 | — exsiccata | 3 3 |
| Mastiche | 8 3 | Soda tartarizata | 9 6 |
| Myristicæ Nuclei | 14 6 | Spongia usta | unc. 1 6 |
| Myrrha | 7 3 | Spiritus Ammonia | M. lb. 4 6 |
| Obtunum | 3 3 | — aromaticus | 4 3 |
| Opoponacis gummi resina | 20 3 | — fetidus | 4 3 |
| Opium (Turkey) | 32 3 | — succinatus | 4 6 |
| Oleum Æthereum | 2 3 | — Cinnamomi | 3 9 |
| — Amygdalarum | lb. 3 6 | — Colchici Ammon. | unc. 0 3 |
| — Anisi | unc. 1 8 | — Lavandulæ | lb. 5 3 |
| — Anthemidis | 6 3 | — Myristicæ | 3 3 |
| — Cassia | 5 3 | — Pimentæ | 3 3 |
| — Caryophylli | 4 6 | — Rosmarini | 4 3 |
| — Cajuputi | 4 0 | — Ætheris Aromaticus | 9 3 |
| — Carui | 1 6 | — Nitrici | 3 6 5 3 |
| — Juniperi Ang. | 6 3 | — Sulphurici | 6 3 |
| — Lavandulæ | 2 6 | — Compositus | 6 3 |
| — Lilii | cong. 4 3 | — Vini rectificatus | 24 3 |
| — Menthe piperitis | unc. 3 13 | Syrupus Papaveris | lb. 4 3 |
| — Menthe viridis Ang. | 4 6 | — Sarsaparillæ | lb. 9 9 |
| — Origan | unc. 1 3 | — Tolutanæ | lb. 2 6 |
| — Pimentæ | unc. 5 6 | Sulphur Sublimatum | 0 6 |
| — Pulegii | unc. 4 6 | — Lotum | 1 5 |
| — Ricini optim. | 3 6 | — Precipitatum | 1 6 |
| — Rosmarini | unc. 3 9 | Tamarinidi Pulpa opt. | 2 6 |
| — Succini | 3 6 | Terebinthina Vulgaris | 0 16 |
| — Sulphuratum | P. lb. 1 2 | — Canadensis | 6 3 |
| — Terebinthina | 1 4 | — Chia | 10 3 |
| — rectificatum | 2 3 | Tinct. Ferri muriatis | 4 3 |
| Olive Oleum | P. lb. 2 0 | Tragacantha Gummi | 8 3 |
| — secundum | 1 9 | — Valerianæ Radix | 1 3 |
| Papaveris Capsula | (per 100) 2 9 | Veratri Radix | 1 13 |
| Pix Abietina | lb. 1 3 | Vinum Colchici | 4 0 |
| Plumbi Acetas | 1 6 | — Ipecacuanhæ | 4 0 |
| — Subcarbonas | lb. 3 8 | — Opli | 8 0 |
| — Oxydum semi-vitreum | 3 8 | Unguentum Hydrargyri fortius | 3 8 |
| Potassa Fusa | unc. 3 6 | — Nitrat | 5 3 |
| — cum Calce | 3 2 | — Nitrico-oxydi | 4 4 |
| Potassa Nitras | oz. 0 6 | Uvae Ursi Folia | 3 3 |
| — Acetas | 7 3 | Zinci Oxydum | 5 3 |
| — Carbonas | 2 6 | — Sulphas purif. | 1 3 |
| | | Zingiberis Radix opt. | 4 3 |

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| Hydriod. Potass. | oz. 9s. dr. 1 6 | Quinine Sulphate | oz. 3s. dr. 4 6 |
| Iodine | oz. 8 3 | Strychnine | dr. 26 3 |
| — Tincture | oz. 1 3 | Veratrine | dr. 30 3 |
| Morphine Crystall. | dr. 21 3 | | |
| — Acetate | dr. 20 3 | | |

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THE METEOROLOGICAL JOURNAL,

From the 20th of JULY, 1826, to the 19th of AUGUST, 1826.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50 High Holborn.

| | July. | Moon. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | | |
|----|-------|-------|-------------|---------|------|------|---------|----------|------------------|----------|---------|----------|------------------|---------|----------|--------|
| | | | | 9 A. M. | Max. | Min. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 9 P. M. | 10 P. M. | |
| 20 | | | 10, | 65 | 73 | 60 | 29 | 90 | 29 | 63 | 72 | W | SW | Fine | Rain | Rain |
| 21 | | | | 67 | 69 | 49 | 29 | 47 | 29 | 64 | 75 | WSW | SW | Clo. | Fair | Fair |
| 22 | | | | 65 | 69 | 55 | 29 | 61 | 29 | 80 | 70 | 84 NE | N | Fair | — | Rain |
| 23 | | | | 56 | 61 | 53 | 29 | 82 | 29 | 89 | 85 | 86 N | NNE v | Rain | Rain | — |
| 24 | | | 82, | 58 | 69 | 56 | 29 | 88 | 29 | 96 | 92 | 82 NE | NE | Clo. | Fair | Fair |
| 25 | | | | 65 | 72 | 56 | 29 | 99 | 30 | 04 | 66 | 70 N | E | Fair | Fine | — |
| 26 | | | | 65 | 72 | 52 | 30 | 10 | 30 | 15 | 72 | 68 ENE | E | Fine | — | — |
| 27 | | | | 64 | 71 | 56 | 30 | 16 | 30 | 12 | 61 | 68 ENE | ESE | — | — | Starl. |
| 28 | | | | 67 | 73 | 57 | 30 | 09 | 30 | 00 | 68 | 72 ENE | ESE | — | — | — |
| 29 | | | | 70 | 77 | 60 | 29 | 94 | 29 | 90 | 63 | 64 WSW | SW | — | — | — |
| 30 | | | | 72 | 80 | 65 | 29 | 92 | 29 | 88 | 60 | 55 SW | SSE | — | — | — |
| 31 | | | | 80 | 84 | 69 | 29 | 83 | 29 | 80 | 54 | 54 SSW | NE | Clo. | — | — |
| 1 | | | | 74 | 80 | 63 | 29 | 87 | 29 | 91 | 62 | 69 NE | ENE | Fair | — | — |
| 2 | | | | 68 | 78 | 63 | 29 | 84 | 29 | 78 | 80 | 76 E | E | Clo. | Fair | Fair |
| 3 | | | 135, | 67 | 73 | 55 | 29 | 76 | 29 | 80 | 83 | 92 NE | E | Rain | Rain | Rain |
| 4 | | | | 62 | 73 | 58 | 29 | 81 | 29 | 86 | 84 | 78 NE | NE | Clo. | Fair | Starl. |
| 5 | | | | 62 | 69 | 59 | 29 | 85 | 29 | 85 | 84 | 79 NE | S | Rain | — | — |
| 6 | | | | 68 | 68 | 63 | 29 | 90 | 29 | 98 | 70 | 63 NW | W | Clo. | — | — |
| 7 | | | | 71 | 76 | 62 | 30 | 02 | 29 | 99 | 62 | 65 W | W | Fair | Fine | — |
| 8 | | | | 68 | 78 | 62 | 29 | 94 | 29 | 85 | 71 | 65 WSW | W | Fine | — | — |
| 9 | | | | 68 | 76 | 61 | 29 | 83 | 29 | 82 | 66 | 71 NE | E | — | — | Clo. |
| 10 | | | 9, | 67 | 72 | 60 | 29 | 81 | 29 | 76 | 72 | 71 E | SSE | Clo. | — | — |
| 11 | | | 30, | 63 | 65 | 55 | 29 | 71 | 29 | 77 | 75 | 79 SW | NW v. | Rain | Rain | Fair |
| 12 | | | | 65 | 70 | 55 | 29 | 85 | 30 | 01 | 67 | 59 W | W v. | Fair | Fine | Starl. |
| 13 | | | | 67 | 72 | 56 | 30 | 05 | 29 | 91 | 64 | 61 S | SE | — | — | — |
| 14 | | | | 71 | 76 | 57 | 29 | 9 | 29 | 90 | 62 | 68 SW | WSW | — | — | — |
| 15 | | | | 64 | 73 | 61 | 29 | 92 | 29 | 83 | 70 | 70 SW | SW | — | — | — |
| 16 | | | | 64 | 70 | 58 | 29 | 81 | 29 | 85 | 79 | 72 W | W | Rain | Fair | Clo. |
| 17 | | | | 63 | 73 | 65 | 29 | 91 | 30 | 08 | 72 | 70 WSW | WSW | Clo. | — | Fine |
| 18 | | | | 73 | 78 | 62 | 30 | 14 | 30 | 18 | 69 | 68 WSW | SW | Fair | — | — |
| 19 | | | | 67 | 79 | 62 | 30 | 16 | 30 | 03 | 69 | 70 SW | E | — | — | — |

The quantity of rain fallen in the month of July was 1.16 inch.

NOTICES TO CORRESPONDENTS.

THE Readers of the MEDICAL REPOSITORY may perceive, from this Number, that it is our intention to extend our monthly limits to at least six whole sheets, or 96 pages, and to print the greater part of the work in a closer and more uniform type than formerly, which will be equal to a still further extension of the limits of the work.

Several Communications are received, and are under consideration.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

The Index to the preceding Volume will be delivered with the next Number.

Communications, and Works for Review, are requested to be addressed (post-paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 154.

OCTOBER 1, 1826.

VOL. XXVI.

No. XVI.—NEW SERIES.—VOL. III.

PART I. R E V I E W.

I.

OF CONSTITUTIONAL IRRITATION.

An Inquiry concerning that Disturbed State of the Vital Functions usually denominated Constitutional Irritation. By BENJAMIN TRAVERS, F.R.S., Senior Surgeon to St. Thomas's Hospital, &c. London, 1826. Pp. ix. —556.

THE task which Mr. Travers has undertaken in the volume before us is of the same kind with that which Dr. Thompson has so well executed respecting inflammation. It is, however, attended with much greater difficulty, inasmuch as the term irritation is of much more extensive import and more vague application. In writing a history of inflammation, there are very many (indeed the greater part of the phenomena are so) appearances that are visible to the eye; and if some hypotheses are perhaps existent respecting the state of the blood-vessels, these but little interfere with the historical narrative. But it is far different with irritation. Its manifestations, indeed, are as various as the different organs of the human body; and yet of itself we may make the same observation that Haller has done respecting another point, 'à mente potius subtilitate excogitare liceat, quàm sensuum testimonio confirmare.' The object Mr. Travers has had in view, is to remove some part of this obscurity, and render it an intelligible term; and not, as he well observes, as has been hitherto the case, 'an empirical subterfuge.' That he should at once have brought out a perfect work, so that nothing should remain for his successors, could not reasonably be expected; but that he has very materially cleared the way

VOL. III. NO. 16.—NEW SERIES.

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for further investigations cannot be denied. His practical remarks are every where valuable; and the whole volume is evidently the production of a highly-intelligent and observant mind.

Previous to entering upon the inquiry into morbid irritation, the author briefly considers irritability as a principle of health, and the modifications to which it is subjected. He has at once extended the term, however, far beyond what was its original signification, either as proposed by Glisson, or adopted by Haller. With the former it was perhaps of more ample import than with the latter, by whom it was confined to that principle by which muscular structures are enabled to contract; while Mr. Travers employs it as the principle by which every organ is incited to perform its function.

‘Every part of a living animal has its peculiar function, to the performance of which it is incited by an appropriate stimulus. Its susceptibility of the impression of such stimulus is denominated its irritability. If an organ, perfect in respect of structure and nourishment, be insusceptible of its stimulus, it is devoid of irritability; if the organ be imperfect, *its irritability and function will be imperfect.*’

To this extension of the term we have no farther objection, than that, from its having been long exclusively applied to the mode of sensibility in a particular structure, it has a tendency to beget confusion. If, however, the reader remember the definition as laid down above, he will have no difficulty in comprehending the general train of Mr. Travers’s reasoning.

The manifestations of irritability, or the manner in which it becomes evident to the senses, must necessarily vary with the function of the organ in which it is situated; and hence it will in some be ‘sensation; in others motion; in some a combination of both these; and in others a result of such modification of sensation and motion as escape our powers of perception, and of which we discern only the effects.’

Irritability thus considered, therefore, becomes essential to life, and can never be totally destroyed but with the destruction of life itself. A single organ may be lost, and its irritability be destroyed, provided it be not one of those that are named vital organs; but if one of these, as the brain or the heart, become insusceptible of its peculiar stimulus, then life must fail likewise. Neither do the experiments which prove that the mechanical parts of respiration and circulation can be carried on when the brain is destroyed, authorise us to infer that irritability is resident essentially in organs distinctively from the system of which they form a part; for

they are mechanical parts of the functions alone that can be supported, and even these but temporarily. The parts are supplied from the consentaneous operation of the whole; and when the resident irritability of a separated organ is exhausted, it can continue its function no longer, because it has not whence to draw support.

Of life, Mr. Travers adopts the sentiments of Mr. John Hunter. 'Life is a property (a principle) we do not understand—we only see the necessary steps leading towards it.'

Irritability is possessed in very various degrees by different individuals, and is modified by modes of life, diet, mental emotions, &c.

Having thus considered irritability as a principle of health, he next considers it in disease, or morbid irritability. Morbid irritability is a disposition to be excited beyond the natural and common effect by its appropriate stimuli. Thus an irritable eye cannot bear the light—the stimulus produces an uneasy sensation, instead of the natural and agreeable sense of sight: but irritability may be morbid by diminution as well as excess. Thus, an eye that has been long exposed to the glare of the mid-day sun becomes morbid by the reduction of its irritability, and a permanent spectrum is the consequence. Thus, also, an irritable heart is readily excited to palpitation—an irritable stomach is easily nauseated—from an irritable bladder the urine is frequently discharged, &c.

Irritability is also direct or sympathetic. Direct irritability requires no explanation. Sympathetic may take place either from the mind to the body, or from the body to the mind; but either may be most seriously affected without exciting any sympathetic irritation in the other. Thus terror may destroy the intellect, while the body evinces no disorder; or a limb may be torn off, and the individual die in twelve hours, without exhibiting the slightest mental disturbance. But sympathy, with mental emotion, may distress particular organs, as bad news will destroy the appetite, excite peristaltic action of the bowels, &c. The irritability of one part of the body, also, may be disturbed by sympathy with another, as injuring a tendon may produce sickness.

Mr. Travers then makes some remarks upon the variations of sympathies, which we pass over; and after observing that, even in health, physical and mental irritability are usually correspondent; that if one is in excess, the other is likewise in excess,—he adds, that in disease this relation is far more evident, and that the existence of one speedily calls up the other.

The next point to which our attention is directed, is, what is an irritable habit? Mr. Hunter has defined this to be 'an

increased disposition to act, without the power to act with, or over-action to the strength of parts.' In this definition Mr. Travers coincides; and, reasoning, we imagine from his own experience, infers, that in such habits the powers of constraint and resistance are weak and insufficient. As the whole of this passage bears very closely upon the subject of investigation, we shall give it entire.

'Extreme susceptibility and consequent over-activity, are invariably coupled with, and most probably depending upon, weak and insufficient powers of constraint and resistance. The same principle which renders a part irritable renders it over-active. The balance of the system, adjusted by the state of health, is disturbed by the preponderance or deficiency of either of its active functions, as by the imperfection or disease of either of its organs. A weak organ or constitution is one easily disturbed and put out of order, because it is continually excited to greater activity than is consistent with the harmony of the system. But an action may be morbidly excessive or deficient independently of organisation, and this irregularity, although occasional in its commencement, may become habitual. A too irritable nervous or vascular function is therefore as marked a constitutional peculiarity as irritable lungs or skin. In a physical as in a moral sense, every individual has a weak part; and this observation would as often apply to the function, viewed abstractedly, as to the organ. Circulation, or respiration, or nutrition, in one or other of their many intricate processes, is below par in tone. The absorbent capillary function is below par in scrophulous habits—the arterial in the leucophlegmatic—the venous in those disposed to local congestions—the exhalent in the dropsical—and the pulmonary, gastric, hepatic, and renal, are respectively the failing functions in persons who become eventually the subjects of asthma, gout, jaundice, and stone.'

The above passage may be favourably compared with the dogmata of Broussais, as we have given an account of them in a former Number. The distance between the reasoning of experience, and the bold assumptions of dogmatism, are, indeed, very striking. The remaining portion of the chapter we are considering is occupied in illustrating the effects of irritability in different individuals, and in mentioning some of those circumstances, so far as they are known, which render persons unfavourable subjects for operation or injury. It is not necessary to do more here than refer to the fact that such differences do exist; but of the circumstances which may lead us to recognise the peculiar liability, we shall give a more detailed account.

The actual state of health is of great importance in this respect; and Mr. Travers has repeated the thrice-told tale, that a state of rude health is unfavourable to operations. It has rather surprised us, however, that while he evidently is

aware, from a note which he has inserted beneath, of the inaccuracy of this opinion, he should yet have retained it in the text. In the lower animals, operations are borne with impunity without any previous preparation, and when we may suppose them to be in perfect health. We have ourselves frequently opened the abdomen of a rabbit for the purpose of experiment; and, after closing the wound, the animal has been perfectly restored in a few days. But the truth is, as Mr. Travers himself has stated it, what is called rude health is not really health, but

‘A forced state; that in which the nutrient powers are tasked to the uttermost, and successfully struggle with a surplus of diet and stimulus, ridding the body of both by the action, at its full stretch, of every secreting organ. The subjects of this class are perpetually running upon the verge of the boundary, between health and disease; a sudden shock, deranging some important function, destroys the equilibrium of the machine which its overpressed powers are the less capable of reinstating.’

It would therefore be a more correct mode of speaking, to say that a plethoric state of the system is unfavourable to operations, and that it ought to be reduced before they are hazarded.

Persons who have indulged much in spirituous liquors, or even in ale, are very unfavourable subjects of operations, nor in any class do slight injuries more frequently terminate fatally. Mr. Travers has noticed this fact in brewers’ servants; and we know that their system is generally highly plethoric. The debauchee of high life is upon an equality in this respect with the drunkard of lower rank; and both require a treatment the very reverse of that which may be termed a nutrient plethora:

‘For while the latter will be infinitely benefited by full blood-letting, and other means of reduction, wine and opium can alone save the former.’

Pregnancy is also a circumstance which influences unfavourably in injuries and operations. Mr. Travers has related the instance of an operation in a case of exomphalos in the fifth month of pregnancy, where, though it was performed very early, diffusive peritoneal inflammation set in, and destroyed the patient; while another case operated upon fifty hours after delivery, and with the intestine gangrenous, terminated favourably.

The pre-existence of organic disease is also a disadvantage; but within our experience, disease of the liver is more prejudicial than that of any other organ. Several instances are cited in the volume before us, where very slight disease of

the lungs appeared to produce a fatal termination. We shall quote one of these cases, as it appears to us to bear also upon another question in pathology, which we shall briefly allude to.

‘ A man whose hand was amputated for a diseased wrist-joint, supported the operation with firmness, and was proceeding in all respects well, when, on the third day, he suddenly expired. On examination, the lungs were found to contain numerous small tubercles in an incipient stage, and a recent copious effusion of serous fluid had taken place between the tunics of the brain.’

The question upon which this fact appears to bear, and it is by no means single, is the origin of tubercles. We have sometimes thought that we had seen cases of tubercular consumption consecutive to simple pneumonic inflammation; and we have therefore been somewhat inclined to regard inflammation as their origin. But a little reflection upon the illustration just quoted will perhaps make our readers equally with ourselves hesitate in coming to this decision; for the inflammation may only have caused their more rapid development, the disease itself having pre-existed, but in an inert state: and if this be the case, we may then proceed farther, and refer the source of the tubercles to the morbid irritability of the organ,—understanding by this expression, a morbid action distinct from inflammation, although we are not yet acquainted with its precise nature.

We have already remarked upon the performance of operations in health; and we have stated what we believe to be a misapprehension on the subject. The following extract from a communication of Mr. George Young to Mr. Travers, is a farther proof of the correctness of our opinions on this head, while it admirably illustrates the proper plan of treatment.

‘ A healthy carman came under my care with a loose cartilage in the right knee-joint. It had several times occasioned him to fall suddenly, and he was very anxious to submit to an operation to get rid of it. It appeared to me desirable to accustom him before the operation to the reduced diet, rest, and restraint, which would be necessary after it. He accordingly kept the house. On the second or third day of his confinement, I put on the roller, and bound on the back splint, exactly as I intended to do after the operation, to keep the limb perfectly steady. This confinement of the limb occasioned a restless night; some fever, a whitish tongue, a quickened pulse, a little headach, spare and high-coloured urine. He was very unwilling to continue the bandage and splint, to which he ascribed (and justly) all his constitutional disturbance; and the utility of which, prior to the operation, he could not at all comprehend. This circumstance, however, forcibly suggested to me the

importance of accustoming him to restraint: it was, therefore, continued, the excitement which it had produced gradually subsided; and when I found the bandage no longer occasioned any irritation, I performed the operation. Not one untoward symptom arose, the constitution was not in the least ruffled, and the wound healed by the first intention.'

The second chapter enters more fully into the effect of local injuries in producing constitutional irritation; and it is commenced by defining irritation to be 'an extraordinary excitement of the irritability of a part, or of the system.' By this epithet 'extraordinary,' however, it must be very evident that we cannot understand merely a greater intensity of excitement, but a difference also in kind; for if it be merely of the same kind, then, as irritability has been defined 'a susceptibility to the impression of such stimuli as incite to the performance of the natural functions of a part, or the whole,' an extraordinary excitement would only provoke to a more energetic action of the natural function. But we know that this last does not happen; but that the product of morbid irritation is altogether different from that of health, consequently the excitement of the irritability must also be different. We do not feel certain that Mr. Travers intended this interpretation; but it appears to us a necessary consequence of his definition.

Irritation is distinguished from inflammation by the one being dependent upon the vascular, and the other upon the nervous system. Both kept within due limits have a wholesome tendency, and serve a salutary purpose; and both may prove fatal if not under proper control. Both also are most intimately connected; or, in the language of the author, 'their relation is as intimate as that of the systems, of the extraordinary actions of which they are the results.'

Local irritation, as distinct from constitutional irritation, is manifested by change in the sensibility of a part—that is to say, the same stimuli excite different sensible effects. In his illustration of this fact, which is generally true, Mr. Travers has certainly instanced some cases as examples which we should rather consider as examples of the contrary, viz. of the actual absence of irritation altogether. His words are:

'Local irritation is demonstrated by an alteration in the habitual and proper sensation of a part, as a depravation or suspension of function in an organ of sense; an aberration or delusion of perception; a vitiation, suspension, or redundancy of secretions; an irregular and involuntary action of muscles; or a partial paralysis.'

Now, that most of the instances here adduced are genuine

instances of disordered irritability, or morbid irritation, is almost self-evident; but surely the suspension of function in an organ of sense, which function for its due performance is dependent upon a healthy state of its irritability, rather argues the want of this property, than its undue excitement. In like manner, also, though an irregular action of muscles may be owing to local irritation, it is scarcely possible to conceive that paralysis shall be derived from the same source; for paralytic muscles, so far from evincing any extraordinary sensibility to their usual stimuli, are altogether insensible to them. Consequently, being thus insensible, they must have a deficiency of irritability, or rather this must be null; and it is therefore impossible that their irritation can be where that property is not, in the excitement of which it consists. If, however, it be meant, that the manifestation of irritation in one part is suspension of function or paralysis in another, with some limitation perhaps it may be admitted; but this ought, in order to render the passage accurate, to have been clearly stated.

Another mode in which irritation is manifested, is by pain without inflammation. Numberless illustrations of this remark must present themselves to every intelligent and observant practitioner; and they form perhaps the best possible proof, that irritation may exist independent of all manifest alteration. The following note we quote principally on account of its practical utility. Medical men are frequently consulted for pains in the female breast, where no change of structure can be detected. We have known women slighted and disbelieved on the one hand, and on the other unreasonably alarmed by the dread of cancer. It is right, however, that it should be more generally known than it seems to be, that neither the one plan nor the other is correct. Pains of the severest kind often exist, where neither cancer ensues, nor imposture ought to be suspected.

‘The most obstinate case of irritable breast which has fallen under my notice, was supposed to originate from a needle having formerly penetrated the integument of the gland. In another female, a similar affection of the knee-joint was attributed to the same accident. After the lapse of many months from the extraction of the needles, and in the total absence of inflammation, the complaint continued in either case unrelieved and immovable.’

A third manifestation of local irritation is inflammation, which bears an exact proportion to the nature of the wound and the habit of the patient.

Local irritation may be extended to the constitution, either

immediately, or as a consequence of inflammation. As illustrations, Mr. Travers adduces burns, crushed joints, compound dislocations, &c.

The terminations of irritations, we shall give in Mr. Travers's own words.

'Local irritation may be said to terminate in resolution, in local inflammation, or in constitutional irritation. The first term expresses gradual subsidence or retrocession, whether a natural crisis, or effected by the assistance of art. The second I consider a termination, because having provoked the act of inflammation, the original irritation loses its independent character, and assumes a symptomatic form. The third and most important termination of local is in constitutional irritation, indicated by a propagation or extension of the irritation to the great sources of nervous energy, and from thence to all parts of the system.'

We are thus brought to the principal subject of the volume, viz. constitutional irritation, which we shall now proceed to lay before our readers, with such remarks as it may appear to us to justify.

Constitutional irritation is far more dangerous than local irritation, 'as the disorder of the whole is of graver importance than the disorder of a part.'

In speaking of the causes of constitutional irritation, Mr. Travers has mentioned those only which are more especially the province of surgery. We do not, however, apprehend, that from thus confining himself he conceives that constitutional irritation never has place, excepting when excited by such causes. Certainly the fact is otherwise; and some of the most important local diseases dependent upon constitutional irritation, or at least exhibiting all the symptoms and phenomena which Mr. Travers mentions in the course of his work, as indicative of this state, do occur without any such exciting cause. The causes enumerated by Mr. Travers are the various kinds of injury, and 'inflammation, the result of local injury.'

Constitutional irritation may be excited immediately, and before any diseased action threatening alteration of structure is set up, or it may be the consequence of such actions. Pursuant to this general idea of the manner in which constitutional irritation is demonstrated, Mr. Travers divides it arbitrarily into two kinds, direct and reflected. By direct, he understands such cases as are the immediate consequence of the injury, which proceed solely from it, in which the constitution has only a secondary part. Local treatment consequently abates the disturbance of the system. Reflected irritation, on the other hand, proceeds always from the con-

stitution. As the result of some constitutional peculiarity, with the precise nature of which we are unacquainted, an injury of the slightest kind in itself becomes extremely hazardous ; or, to employ Mr. Travers's own language :

‘ In the first, the local appearances are conditions dependent on local causes ; in the second, they depend on constitutional causes. The symptoms characterising direct constitutional irritation are, in the nervous systems, rigour, delirium, convulsions, coma ; in the vascular, the fever of phlegmonous, suppurative, ulcerative, and gangrenous inflammation. Those which belong to reflected constitutional irritation are, in the nervous system, epilepsy, tetanus in all its modifications, and other anomalous forms of spasm, mania, &c. ; in the vascular system, the fever accompanying scrofulous and carcinomatous inflammation, erysipelas, carbuncle, &c.’

The general plan of this division, Mr. Travers has so well defended, and so candidly admitted that some difference may be entertained with respect to the details, that though not altogether agreeing in the latter, we do not feel disposed to contest them. For useful purposes, it is quite sufficient, that, having recognised the two extremes, we ever remember in practice that such cases are seldom met with.

The most undeniable cases of direct constitutional irritation are instances of poisoned wounds, and of those no variation of opinion can exist : but in the majority of examples in common practice every thing is mixed ; and even should the wound have been the exciting cause, it is only so because the constitution is evil. Both to the one and the other, therefore, our therapeutic means must be applied, otherwise the irritation of both, acting reciprocally upon each other, must increase at once the local and general disturbance.

In the greater or less liability to induce constitutional irritations, local injuries are influenced by many contingent circumstances. The chief of these are—the nature of the part injured, the description and the magnitude of the injury, and the subject of it.

In estimating the influence of the part injured, Mr. Travers asserts, that parts of low organisation are more prone to induce serious disturbance in the system at large than parts of higher organisation ; and he even goes so far as to maintain that, if it were possible to abstract from the mucous membrane of the alimentary canal its intimate relation to the vital functions, the constitutional irritation arising from injuries of the tendinous sheaths and ligamentous capsules, and followed by inflammation, would be far more intractable than inflammation of that membrane. This particular illustration is put in such a way as renders it difficult to refute, from the

impossibility of the conditions ; but with regard to the correctness of the general opinion, very much doubt must, we admit, exist ; for where the fibrous parts of the body are seriously injured, very great violence must have been present, and the softer parts materially hurt ; and how shall we separate the injuries of the different structures from each other ? Again, it certainly is not true, that fibrous parts readily, from slight wounds, put on an irritative inflammation ; for how very seldom is the breaking of a tendon followed by general, or even much local disorder, if no further injury has been effected ? We much, indeed, suspect that this opinion, which is not a modern one, has sprung from considering morbid phenomena as principally due to injury of fibrous membranes, which only arose from these in common with others : the whole, and not any one part in particular, having excited the constitutional irritation.

The integuments of the head, chest, and abdomen, bear injuries with less impunity than the limbs. The muscles, tendons, and fascia bone, arteries, absorbents, and nerves, are considered in the order we have mentioned them ; and, we presume, because this is their supposed relation, in the liability to produce disturbance of the constitution. The great tendency of veins to become seriously affected from slight injuries is well known ; and, if we admit the author's opinion respecting fibrous membranes, we may say with him, that ' veins approach nearer to the character of fibrous membranes : ' certainly the consequences of injury to the veins are some of the most formidable that are ever met with in surgery, from whatever cause proceeding.

The nature of the injury has also a very material effect in modifying or exciting irritation. Thus punctured wounds are usually of more serious consequence than broad and bold ones ; yet this is not so much from the nature of the wound as from the arrangement of the part through which it penetrates : for, if it should only enter the skin and cellular membrane beneath it, without piercing any fascia, even should suppuration ensue, it would be of little consequence, because the matter would find an easy exit ; but if suppuration should originate beneath the fascia, then, being confined, it must spread,—and thus, from having been a simple puncture, it would become a deep-seated injury of wide extent. Among other peculiarities of wounds, the ' puncture of a nervous filament, the division of which would be unimportant, ' is mentioned. We have not much dependence upon this source of constitutional injury ourselves, because it seems to us impossible to make any incision, however simple, without the incomplete as well as the complete division of many nerves.

We could much have wished, therefore, that an instance of this kind had been given, since, as it admits of easy remedy, it is highly important to be able to recognise it. Is not, however, this rather supposition than experience?*

Contused and lacerated wounds, of which kind are gunshot wounds, are also extremely prone to induce constitutional irritation. The magnitude of the injury is yet another source of modification, both of the local and general disturbance of the system; in the term 'magnitude,' comprehending the destruction of parts as well as the mere extent of injury. That the subject must have a similar influence, is too manifest to require any description; indeed, the very matter under consideration, 'constitutional irritation,' would lead us to this inference, even were it not a fact of almost hourly experience. Perhaps the most remarkable illustration of this is that quoted by Mr. Travers, viz. scrofula. The difficulty of injuries in scrofulous habits, is one of the most perplexing and vexatious trials of surgery.

Upwards of three hundred pages of this volume are occupied in the relation of cases, as examples of direct irritation; and this is perhaps the most interesting and valuable of the whole. They are divided into five different heads, in the following order:—

' 1st. Sudden extreme and unremitting pain, and certain affections of the mind co-operating with bodily disease.

' 2d. Injuries and operations of various kinds.

' 3d. Inflammation, the result of injury or operation, terminating in suppuration or gangrene.

' 4th. Exhaustion from hæmorrhage, or colliquative suppuration.

' 5th. Poisons, animal, vegetable, and mineral.'

For the illustrations of this arrangement, we must refer our readers to the work itself; they will not easily bear abridgment, while they will well repay them the labour of perusal.

In recapitulating the points which the cases are intended to prove, Mr. Travers takes occasion to remark, that the relation between fever and irritation is exceedingly indistinct; and that though some of the phenomena are identical, they respond very differently to treatment, and afford results

* We are aware, that occasionally symptoms of neuralgia have succeeded to the opening of the temporal artery; and we have seen one instance of this ourselves, which, however, recovered in the course of a fortnight. But that this was owing to the puncture of a nerve, who shall prove? Many nerves must unquestionably have been injured, and must in every such operation; yet we apprehend the occurrence of neuralgic pains afterwards to be very rare.

'totally dissimilar.' He has in a former part of the work objected to the employment of 'irritative fever;' and we are disposed to acknowledge the justness of his objection, if the term be intended as significant of the whole series of symptoms consequent to irritation. But does not Mr. Travers himself afford proof, in the opinion just referred to, that there is a time when 'irritative fever' may be properly employed, since there are very many febrile symptoms present, and modified only by that state of the system which we have agreed to designate as 'constitutional irritation?' It appears to us, indeed, that the principal defect of the present work is too much generalisation; it is, however, a very natural result of first investigations into so obscure a subject, and which (if the truth is, as we are inclined to believe it is,) can only be rectified by very long and accurate observation.

The cases afford several instances of death from the perfect exhaustion of irritability, without any power in the system to institute a reaction. Several fatal cases of lithotomy in children having induced inquiry into the cause of it, led to the discovery of spirits having been administered to the children, and thus having produced a state of constitution highly unfavourable to the result of the operation. As one instance of this kind, which was saved in consequence of the treatment adopted after the discovery, we quote the following. It is most highly valuable in a practical point of view, and proves, even to demonstration, the necessity of strict inquiry to the general habits of patients previous to the performance of any operation.

'A child, six years old, became restless within an hour after the operation, which had been in all respects favourable. Between five and six o'clock, the operation having been done at noon, he was cold, faint, without a pulse at the wrist, and apparently dying. In this state, gin and æther, diluted with barley-water, were got into the stomach, and repeated at intervals, until the pulse acquired a steady beat, and the surface its natural warmth. Its effect was immediate, and as salutary as could be desired. In diminished quantities, the cordial was occasionally administered during his convalescence, which was from this time uninterrupted.

'It was in fact ascertained, that the parents of these children had been in the habit of giving them gin to allay the severity of the paroxysm in micturition. The same treatment has been since resorted to in cases where similar appearances have presented themselves. A man, from the neighbourhood of Maidstone, declared that he could not survive the operation if deprived of his ordinary beverage.'

In this, as in many other examples, it is perfectly clear that inflammation had no concern whatever in the untoward

symptoms. They were entirely owing to an exhaustion of irritability, and through it the destruction of the vital functions.

Under the head of poisons, very many cases of wounds from dissection are given; whether they are rightly or not placed here, is very doubtful. It is entirely, however, a speculative question, which it appears to us that we have not yet sufficient data to decide. Leaving, however, this point, we pass onwards to the consideration of the 'theory of irritation.'

The heading of the first section, viz. 'reciprocal relation of the vital functions,' at once unfolds to us in what manner Mr. Travers would explain to us the manner in which irritation is productive of serious consequences. It is perhaps more explanatory at first sight than the essays which are appended to it; for while these discuss the individual points, the separate parts are never concentrated into one compendious whole.

The first postulate is one which certainly, in our minds, is undeniable, viz. the supremacy of the brain. Whatever may be the opinions of physiologists as to the general influence of this organ over the vital functions, all admit that life can be sustained but for a short time without it. It seems, also, most clear, that irritability is at least one of the properties afforded by the nervous to the other systems of the body; and though afforded in different quantities, and rendered more or less immediately independent in the various structures, is yet entirely indebted for renewal to the nervous system. Even the mechanical parts of circulation and respiration, the only functions that can be prolonged after the destruction of the brain and spinal marrow, are yet only sustainable for a short time; and the secreting functions, those acknowledgedly dependent upon the nervous system, are altogether inimitable: they cease at once.

As the nervous system is universally diffused, so also are its sympathies universal; and thus we have the supremacy and universal sympathy of the nervous system as a foundation of the theory of irritation.

Now, the first symptoms in certain cases of operation and injury which prove fatal without alteration of structure, are such as can alone be referred to the nervous system; and this being admitted, the next inquiry relates to the principle and manner in which they destroy life. The principle, so far as we can recognise it, is the instant or gradual extinction of the nervous energy; and the manner is evidently by acting in the first place upon the circulation. 'Every thing denotes diminished energy of circulation. In addition to

a small and very feeble pulse, we have languor, if not stupor, paleness, chilliness, &c.' If, therefore, the affection of the circulation is complete, there will be no reaction, and then death ensues; or, in other words, supposing the shock to have exhausted at once the irritability of the nervous system, the irritability of the heart, upon which the action of that organ depends, must either, directly or indirectly, fail also—directly, if the exhaustion is universal—indirectly, if, deprived of any farther supply from the nervous centre, it is dependent upon that which had been communicated previous to the injury. In the same way, also, supposing the injury to take place at a distance from the nervous centre, or in a part not intimately sympathising with it, yet may the irritability of the system be gradually exhausted by the morbid sympathy of such a part with the whole. Death is equally the consequence of irritation in the one case as in the other. This we believe to be the theory which Mr. Travers entertains upon this subject; nor do we find any thing actually objectionable in it. He has, however, entered into details and qualifications, for which we must refer to the book itself.

The remaining portion of the volume is occupied in laying down the treatment of irritation. In this there is not much novelty. Some of the directions, however, are more plainly and forcibly given than we have elsewhere seen them. As respects the state of prostration, the following passage has particularly attracted our attention, especially the first part. The great carelessness and the pitiful meanness with which we have seen some cases of this kind treated, because the surgeon was not certain of remuneration,—as well also in some instances from mere indolence,—has induced us to attach more value to these observations than otherwise perhaps we might have done.

' We have two points especially to bear in mind, first, maintaining action; secondly, not forcing action.

' The first requires the incessant observation of the surgeon. No nurse can be qualified to superintend, or at least to direct, the administration of the stimulus. It is the devotion of a few hours to the life of a fellow-creature. The duty may be divided. The happy effects resulting in numerous instances from perseverance in the recovering of a drowned person, although a shorter and less delicate process, hold out strong encouragement in these cases. When syncope is overcome, the system, it is true, rights itself: the phenomena, however, of syncope and shock, allowing for the difference of duration, bear a considerable analogy.

' Purgative medicine ought not, in my judgment, to be given until the circulation is restored, and pretty steady; then a spoonful

of castor oil may suffice. It is idly premature to talk about the secretions. Medicines directed to this object cannot act beneficially in such a state of the nervous system, if, as I much doubt, they act at all. It is, besides, of importance to avoid putting any thing into the stomach but what is essential to support the faltering action of the heart and diaphragm. Since it is upon the stomach we place our chief reliance, we should endeavour by every means to keep it in temper.'

The only other point which we shall notice, is the effects of irritation from hæmorrhage. It seems the unfortunate destiny of medicine to be perpetually varying between opposite extremes. Thirty years ago, it was deemed little short of murder to bleed copiously. About ten or fifteen years since, every thing was to be effected by bleeding. Acute chronic, sthenic, asthenic maladies, were all subjected to the lancet; and, under the wide but undeserved reputation of some medical teachers, it has been carried to a most lamentable extreme. Yet, on the other hand, we now seem fated to what we may be permitted to term a reaction; and we fear that there are indications of a return to the former absurd dread of depletion by blood-letting. Dr. Marshall Hall has been the first to oppose it; and though evidently not participating himself in an inclination to prohibit it generally, may incautiously be the source of much mal-treatment. Mr. Travers has referred, with deserved approbation, to the general correctness of Dr. Hall's opinions. We only wish ourselves to inculcate a caution, that, by avoiding one extreme we take care that we run not into another. That much mischief may be done by blood-letting, is certain; but let it not be forgotten, that extensive disorganisation and death may be the consequence of neglecting it.

The last section embraces the subject of poisons; and in this Mr. Travers strongly contends for the actual absorption of virus in the majority of fatal cases arising from dissection. Whatever may be the case, however, we entirely agree with the author in the advice contained in the following extract:—

' Since it cannot be known, at the moment of infliction, what may be the nature of the injury, it is as little to be expected that young men will habitually apply a caustic on the instant, as that they will smear their fingers with oil or pomatum, or clothe them with gloves, before handling a body. Neither are such things, in my opinion, worthy of men in earnest in their pursuit: but I must take leave to deprecate the absurd and affected hardihood of persevering in dissection, and especially in visceral examinations, with recently cut or chopped fingers, affording every facility for absorption; and thus needlessly exposing themselves to the imminent

risk of a disease, from which so few even of the most robust escape with life.'

While, however, on this subject, we shall shortly advert to the proper plan of treatment in this accident, when it does happen. It appears to us, that Dr. Barry has most satisfactorily proved the danger of employing caustic in such cases, and that the proper plan is rather either immediately to suck the wound, or, if a cupping-glass can be applied, to use this instead. Caustic is very likely to inflame the wound, and thus to add, should poison have been inserted, the dangers arising from inflammation. The account we gave in the last Number of Dr. Barry's experiments will enable our readers to satisfy themselves as to the accuracy of those facts, upon the which the plan we have advised in the treatment of these wounds depends; but we would particularly recommend Dr. Barry's book itself. The details he enters into carry with them ample proof, in our opinion, of the correctness of his doctrines.

The appendix of Mr. Travers's volume contains a communication from Dr. Farr on the subject of wounds received in dissection; and another from Sir James Macintosh upon the question—'why certain muscular actions, though affected by the passions, are independent of volition.' Dr. Farr's contains some interesting observations; and at any time the experience of so excellent a pathologist must be valuable. Of Sir James Macintosh's theory, we must confess ourselves unable to discern the ingenuity. It seems little more than a play upon words.

II.

PRACTICE OF PHYSIC IN THE REIGN OF JAMES I.

*Select Observations on English Bodies of Eminent Persons in Desperate Diseases. First written in Latin, by JOHN HALL, Physician; after Englished by JAMES COOK, Author of the Marrow of Chirurgery. To which is now added, An Hundred like Counsels and Advices for several Honorable Persons. By the same Author. In the close is added, Directions for Drinking of the Bath Water and Ars Cosmetica, or Beautifying Art. By H. STUBBS, Physician at Warwick. The third edition. London. Printed by H. H., and are to be Sold by SAMUEL EDDOWES, next door to the Fleece Tavern, near the Royal Exchange, in Cornhill. 1683.**

It will not, we trust, be thought that we are unjustifiably diverting the minds of our readers from their more appropriate

* The first edition of this work was 'printed for John Sherley, at the Golden Pelican, in Little Britain, 1657.'

studies, if we draw their attention for a little while to a medical work written two hundred years ago. With many, we are sure we shall find an excuse, when we tell them that the author of the work which is to be the subject of the present article was Shakspeare's son-in-law, the husband of the great poet's favourite daughter, and an eminent physician at Stratford. Its long and boastful title-page has certainly an unhappy resemblance to those occasionally met with in the present day, and which, like the canvasses hung before a show, are generally the gaudiest when the exhibition within is the worst. But this 'bravery' is entirely to be laid to the charge of the translator James Cook, author of the *Marrow of Chirurgery*, a man who seems to have had a peculiar genius for title-pages and puffing in general, and in the arts of publication to have gone before the age in which he lived. It is more than probable, that Dr. Hall never intended his part of the book to be published without many alterations, for it consists entirely of his private notes of cases: how Mr. Cook got possession of them, must be told in his own words.

'Being in my art an attendant to parts of some regiments to keep the pass at the Bridge of Stratford-upon-Avon, there being then with me a mate allyed to the gentleman that writ the following observations in Latin, he invited me to the house of Mrs. Hall, wife to the deceased, to see the books left by Mr. Hall. After a view of them, she told me she had some books left, by one that professed physick, with her husband, for some mony. I told her, if I liked them I would give her the mony again. She brought them forth, amongst which there was this with another of the author's, both intended for the presse. I being acquainted with Mr. Hall's hand, told her that one or two of them were her husband's, and shewed them her; she denied — I affirmed, till I perceived she begun to be offended. At last I returned her the mony. After some time of tryall of what had been observed, I resolved to put it to suffer according to perceived intentions; to which end I sent it to London, which, after viewed by an able Doctor, he returned answer, that it might be usefull; but the Latin was so abbreviated or false, that it would require the like pains as to write a new one. After which, having some spare hours (it being returned to me), put it into this garb, being somewhat acquainted with the author's conciseness, especially in the receipts, having had some intimacy with his apothecary. To compleat the number to 200, I have given the observations of some others, wherein for your advantage ye may observe severall under one head. It seems the author had the happinesse (if I may so stile it) to lead the way to that practice almost generally used by the most knowing, of mixing scorbuticks in most remedies: it was then, and I know for some time after, thought so strange, that it was cast as a reproach upon him by those

most famous in the profession. He had been a traveller acquainted with the French tongue, as appeared by some part of some observations, which I got help to make English. His practice was very much, and that amongst most eminent persons in the county where he lived, and those adjacent, as may appear by his observations. If my pains in translating for the common good may be any wayes advantageous, it is all I look after,—which shall be earnestly prayed for, by

‘ An unworthy friend,

‘ JAMES COOKE.’

‘ *Postscript.*—I had almost forgot to tel ye, that these obser. were chosen by him from all the rest of his own, which I conjectured could be no lesse than a thousand, as fittest for public view.’

With respect to the postscript, we look upon it as having been added with more attention to appearances than to truth; for in the directions left by Dr. Hall concerning his papers, we find nothing which seems to bear out what it asserts. Mr. Cook, at all events, thought fit to translate the notes from what was then the general language of learned physicians into the vulgar tongue, preserving and printing at full length the names of the eminent persons, men, women, and children, at that time yet living in his own neighbourhood, and whose cases were therein, as will be seen, very plainly and minutely detailed,—prefixing, too, to the work not Dr. Hall’s portrait, but his own. These circumstances all concur to render this now scarce and curious book a somewhat remarkable production. The close connexion of the author with the proudest name in English poetry, the quaintness of language by which the work is distinguished, the openness of its communications, the candid, and, as it were, unprepared details which it contains, and the occasional views it reveals of the accredited theories of the day, all conspire to give it a degree of interest both with the physician and the antiquary. The worshippers of Shakspeare sought with natural anxiety in these pages for the *case* of the immortal Bard himself, as he died at Stratford, and was attended in his last illness by Dr. Hall; but the date of the earliest case recorded in this collection, that of the Countess of Northampton, is 1622, four years after Shakspeare’s death. If Mrs. Hall possessed any earlier manuscripts of her deceased husband, they were either lost in the general annihilation of relics of the poet and his family, or yet remain to be brought to light. It is, we think, the conjecture of Dr. Drake, the author of several very elegant and interesting literary productions, that Shakspeare’s death was occasioned by angina pectoris. We cannot at present refer to the passage

containing this opinion ; but if it be founded, as we believe it is, on the circumstances of Shakspeare having been previously in good health, on his having exerted himself too much at a fire which happened shortly before his death, and on his having died, in what may almost be called the prime of life (about 50), we cannot admit the evidence, although we can sympathise with the ingenious author's desire to know all that bears any relation to the wonderful man, whose history and works have occupied so much of his attention. Shakspeare was a man of social, perhaps of convivial habits ; he seems never to have been very careful of himself,—and our life is too much beset on all sides with death, and at all ages, to render his premature disappearance from the stage of existence a matter of particular surprise.

Mr. Cook dedicates his translation to Fulk, Lord Brook, Baron Brook, of Beauchamp Court, many of the cases having occurred in persons of his Lordship's family, ' for whose memory,' says the translator, ' I could not transcribe with dry eyes.' He adds, candidly enough, ' what their loss was to the public is well known, and no less lamented ; and so great to me that I can never forget it.'

Concerning the counsels and advices which he has appended to Dr. Hall's notes, he says they were collected by him at divers times, when physicians were consulted by the noble family to which he was attached ; and expresses a hope, that he does them no wrong by it, they ' having, for their pains, prescriptions, and directions, received generous pay and noble entertainment.' As regards ' H. Stubbs, physician at Warwick,' he is thus favourably introduced to the reader. ' Something there is intermixed, and something also in the close, of Dr. Stubbs's, whose civilities and openness I cannot but remember. He was not a person greedy of gain. But he is gone ; and I cannot but say, seldom comes a better. But to pass this, I hope my service in this impression will be civilly accepted, which is all, save to crave leave to subscribe myself always a friend to the friendly, and an enemy to none of mankind.'

There is to us an indescribable charm in this simplicity and frankness of language ; it expired at the birth of professed criticism. We must accept Mr. Cook's labours civilly ; and we do, a little, repent us of our early remarks on the *Marrow of Chirurgery*.

The alphabetical table prefixed to the work is itself a kind of curiosity ; nor can we help smiling at some of the heads, in which things are rather too plainly called by their right names,—modern refinement, at least, absolutely requiring some modification of the manner in which some of them are

expressed. At the bottom of the first page, we have, *agues; appetite naught; apostume of the stomach.* At the top of the next, *arse-gut fallen out.* By and by, we have *palsey; pearl in the eye; pissing bed; desire to piss; pissing blood,—* and so forth. For these elegancies, we imagine we are wholly indebted to Mr. Cook: but we turn from them to the cases, to the work of Dr. Hall himself. His own title is much more modest than that prefixed by his translator, and is as follows:—‘CURES, Historical and Empirical, experienced on eminent Persons in several places;’ and he puts above it a motto, ‘Health is from the Lord.’

He appears to have been a man of sincere piety and great humility, never boasting vain-gloriously of himself: he concludes the detail of many of his most severe cases which terminated favourably, with grateful expressions for the assistance of the Almighty; and prefaces an account of his own case, after his recovery from fever, in the 57th year of his age, by this fervent and pious thanksgiving to God:

‘Thou, O Lord, which hast the power of life and death, and drawest from the gates of death; I confesse, without any art or counsell of man, but only from thy goodnesse and clemency, thou hast saved me from the bitter and deadly symptomcs of a deadly fever, beyond the expectation of all about me; restoring me, as it were, from the very jaws of death to former health; for which I praise thy name, O most merciful God, and Father of our Lord Jesus Christ, praying Thee to give me a most thankful heart for this great favour, for which I have cause to admire Thee.’

The first case detailed, is one, among many which occur in the book, shewing, that in that day nervous disorders were commonly treated and cured by purgative medicines, although the cure was often attributed to alteratives, as guaiacum, sarsaparilla, water-cresses, wormwood, &c., given after a very active course of cathartics.

Then follow two cases of ophthalmia, in which ʒss. of pil. de succin. cræton, in three pills, was given at bedtime, which produced five or six stools. Equal parts of juice of house-leek and white wine were used to the eyes; and afterwards the following collyrium:—

R *Sarcocol* wash'd, ʒiij.
Prepared Tutty, ʒij.
Aloës, ʒj.
White Sugar-candy, ʒiss.
Saffron, gr. iv.
Rose-water, ʒiv.

In another case, white of eggs, beaten with rose-water and *woman's milk*, was the external application; and the head

was plastered with bole armoniack, gypsum, dragon's blood, acacia, pomegranate pills, galls, whites of eggs, and vinegar. What an inestimable treasure would such a book be in domestic practice!

Asthma.—Laxatives were given, and 'for a fume was prescribed the following:—℞ Frankincense, mastich, each ziss.; brimstone, zijss.; juniper, ʒij.; storax, ʒj.; terbenentine sufficient to make a past, which frame into what figure pleaseth.' This, it is said, 'dried up the superfluous humidities of the brain.'

Tertian Ague, with Yellow Jaundice.—Obser. VI. relates a case evidently cured by sharp vomiting and purging; but the most stress is laid on the following, subsequently *given fasting*:—℞ of the inner rind of the Barbary tree; turmeric; shavings of ivory and hartshorn, of each a like quantity; saffron, half the quantity of one of them: make a powder of them all. Dose ʒj. in a rear egg.

In the following case of menorrhagia, we find a very plain and judicious practice successfully pursued.

Observ. VIII.—'Mrs. Chandler, of Stratford-on-Avon,' (200 years ago, courteous reader), 'aged thirty-four, after long sickness, and a great flux of her courses, falling into an ill habit of body,' was cured thus:—First, she took the decoction of sena, &c. for five days; after being let blood, her courses staid to admiration, and she became well. Three years afterwards, being extremely weakened with the like flux in the time of her lying-in, so that death was expected, she was cured by bleeding.

'*Observ. XI.*—Mrs. Hamberry was cured of her face that was full of pustles, itch, and excoriations, and deformed as a leper, with the following medicines:—I purged her body with amber pills, ʒj., given when she went to bed, at twice; using to her face ag. mercurial penot., with the emulsion of white poppy seeds; borax and white-sugar candy.'

Incontinence of Urine.—'*Observ. XII.*—John Emes, of Aluster, aged fifteen, was cured of pissing in bed thus: ℞ *The windpipe of a cock dried*, and made into powder, and with crocus martis given in a rear egg every morning.'

The vehicle in this case was probably the cause of cure; but how are we to account for the use of the dried windpipe of the cock?

'*Scab.*—Mr. Hunt, of Stock Green, aged about forty-six, labouring of a grievous scab and itch, was thus helpt. ℞ Fumitory, borage, bugloss, scabions, wormwood, of each a like quantity, as much as you please; draw out the juyces, of which take fßij. boil-

ing it in whey to the consumption of the whey, always scumming of it; after it is boiled, suffer it to settle. Drink every day a good draught of it cold, with sugar. This is the syr. scabius Joh. Anglici, and a secret by which he cured many of the scab, with which I have cured many also.'

We recommend this secret to those of our brethren who are persecuted with the occasional sight of some pertinacious patient labouring under a refractory cutaneous disease.

Dyspnœa.—The following is so strongly recommended, that we cannot pass it over :—

‘ R Raisins, ℥ss.; hyssop, origanum, horehound, pennyroyal, speedwel, germander, scabions, coltsfoot, carduus benedictus, nettles, each Mss. (Manipulus, ss.); oris roots sliced, calamus aromaticus, each ℥j.; agarick, ℥ij.; senæ, ℥ij.; ginger, ℥ij.; wine vinegar, lbij. Ft. decoctum, pouring in a third part of water, and boiling it to the third part. After straining, add of the best honey ℥xij.; after, boil it to the thickness of an oxymel. You may hang in it afterwards these things following, in a little fine rag, viz. cinnamon, cloves, calamus aromaticus, all powdered. Dose, a spoonful at a time. This is excellent, and worth gold.’

It is rather to be lamented, however, that it is not exactly adapted to extemporaneous prescription.

Observ. XIX. begins thus—‘ Mrs. Hall, of Stratford, my wife, being miserably tormented with the cholick, &c.’ We smile at the expression; but there is something startling in the recollection, that this Mrs. Hall was William Shakspeare’s beloved daughter.*

The subject of the next observation was a poet of considerable celebrity, the contemporary and acquaintance of Shakspeare.

‘ *Observ. XXII.*—Mr. Drayton, an excellent poet, labouring of

* Having touched upon this subject, we shall, we trust, be excused, if we insert the epitaph on Mrs. Hall, written probably by her husband.

‘ Witty above her sexe, but that’s not all,
Wise to salvation was good Mistress Hall;
Something of Shakespere was in that, but this
Wholy of Him with whom she’s now in blisse.
Then, Passenger, ha’st ne’re a teare
To weepe with her that wept with all;
That wept, yet set herself to chere
Them up with comforts cordiall?
Her love shall live—her mercy spread,
When thou hast ne’re a teare to shed.’

These verses (preserved by Dugdale) were, many years since, not greatly to the credit of those then having care of the church, purposely obliterated to make room for another inscription.

a tertian, was cured by the following:—*R* The emetick infusion, ℥j.; syrup of violets, a spoonful. *M.* This given, wrought very well both upwards and downwards.'

Melancholia.—*Observ.* XXXI.—The case of a gentleman, aged sixty, with fever and sleepiness. He was purged. 'After these, there were applied to the soles of his feet *radishes sliced, besprinkled with vinegar and salt*, renewed every third hour. This hindered the recourse of vapours, and drew them back; and so he slept far more quietly, without starting and fear.'—The theory and the practice are here equally curious. Leeches were applied to the anus—a practice not of modern origin, although the French would be glad to claim the honour of it. 'He became well, bidding farewell to physick; and so was cured beyond all expectation, and lived for many years.'

Observ. XXXII. relates to a disease which often proves very obstinate, namely, leucorrhœa.

'Mrs. Garner, of Shipson, aged twenty-two, miserably weakened with the whites, was cured as followeth:—*R* *Cassia newly drawn with parsley water*, ℥vj.; *terbentine washed in parsley-water*, ℥ij.; *gum of guaiacum*, ℥ij.; *with sugar make a bole*. The next day this plaster was applied:—*R* *Ung. comitis*, ℥j.; *gyps. bol. arm.* ā ℥ss.; *cum alb. ovi f. empl.* It was applied to the back. After, I prescribed the following:—*R* *Coriander seeds prepared, seeds of sorrel, plantain, and de agn. cast., each* ℥j.; *sealed earth and bole arm., each* ℥ss.; *spec. diatrag. frig.* ℥j. *Make a very fine powder, and with sugar dissolved in plantain-water make rouls or tablets (add gum tragac.) weighing* ℥ij. Of these she eat one before dinner and supper, and presently after drank a spoonful of red wine. This is admirable in uterine fluxes. By these she was healed.'

In this case, we should ascribe the cure to the bolus of cassia, turpentine, and guaiacum, with the plaster; but we observe the greatest virtue is ascribed to the rouls or tablets.

Observ. XXXIII. concerns a Romish priest 'labouring of an *Ungarick fever*,' to whom the following electuary was given, containing, among other matters, 'precious stones;' without which, Dr. Hall says he has given the electuary 'to corroborate the heart.'

'*R* *Rob. rib., conser. rosar., conser. cas. citrior,* ā ℥j.; *cortic. citr. condit., spe. liberant.* ā ℥ij.; *C. C. præp.* (*C. C.* signifies hartshorn) ℥iv.; *lap. smaragd. rub., hyacinth. præp. ana gr. vj.; flor. sulphur, ℥j.; coral rub. præp.* ℥j.; *succ. granat.* ℥ss.; *syr. acetos. citr. q. s. f. elect. liquid.*

'His meat was besprinkled with this cardiac and alexipharmic powder:—*R* Prepared pearl, prepared coral, burnt hartshorn, prepared granats, each gr. viij.; the fragments of jacqut. smardinea

and rubies, each gr. iij.; one leaf of leaf-gold; *mix them, and make a powder.*

Observ. XXXV.—The Falling Sickness.—A child aged six months. Piony roots were hung about the neck. ‘When the fit afflicted, I commanded to be applied with a sponge to the nostrils the juyce of rhue mixed with white-wine vinegar, by the use of which it was presently recovered. The hair was powdered with the powder of the roots of piony.’

We have seen, ourselves, convulsions suspended by the application of mint to the nostrils, and brought on by withdrawing it, and so repeated or restrained at pleasure.

Observ. XXXIX. shews that in those days hysterical disorders yielded to clearing out the *primæ viæ*, but that the cause of the cure was a mystery. Several other cases occur in the work of the same kind.

‘Joan Chidkin, of Southam, aged fifty, being troubled with trembling of the arms and thighs, often felt vapours ascend to the heart, thence to the throat, and often thought herself suffocated, was thus cured:—*R Merc. vitæ*, gr. v.; *diaphænie*, ʒss.; misc. This exhibited gave two vomits and two stools. After, she took *Theriac. Andromac.*, ʒj., in posset-drink. I purged her with the former again, only adding one grain of the *mercury*, which gave four stools. After which she had the foreiner (former?) *theriac*, with the shavings of *hartshorn*, for four days; by which she was helped miraculously, all symptoms vanishing.”

Joan Chidkin could not be better treated in the present day.

Observ. XLVI. illustrates the treatment of the same disease.

‘Cooper Marit, of Pebworth, aged forty-eight, perceived vapours, or wind, ascending from her feet into the stomach, &c. She was evidently cured by the following:—*R Pil. fœtid.*, Ruffi., ā ðiv.; misc. f. pil. n. 9. She took three at the hour of sleep.’

A plaster was applied to the stomach; but Cooper Marit herself thought most highly of the following:—

‘*R Shavings of hartshorn and ivory*, each ʒj.; *spec. aromat. ros. gabriel.*, ʒss.; seeds of coriander, fennel, anis, each ʒj.; carraway, ʒss.; cordial flowers, ʒj.; marjoram, ʒss.; roots of liquoris and elicampane, each ʒj.; ginger, galangal, nutmegs, cloves, each ʒss.; saffron, ʒj.; beat them grosly, and add sugar of roses the weight of all. Dose, half a spoonful. *She said it was worth gold.*’

‘*Observ. L.—Urinary Calculi.*—John Smith, of Newman, aged sixty, was miserably tormented with the retention of urine for three days, caused by the stone, in which fell out a total suppression, with hazard of life. For his ease many things were used without any advantage. At last they sent for me, to whom I successfully gave

the following:—*R* Winter cherry berries, n. vj.; parsley-seed, ziiij.; boyle them in sufficient quantity of milk, with which make posset-drink, of which he took ℥vj. Syrup of marshmallows by Fernelius, ℥j.; Holland powder, ℥ij.; mix them. He drunk white wine, wherein winter cherries, bruised, were infused. To the region of the bladder, and between the yard and anus, was applied hot the next:—*Take a good big onion and head of garlick, fry them with butter and vinegar.* These, thus used, procured urine within an hour, with some stones and gravel; and so was he delivered from that long, pernicious, and eminent danger,—for which God be praised.

Observ. LX.—Vermes.—This is the case of ‘Talbot, the first-born of the Countess of Salisbury, aged about one year, being miserably afflicted with feaver and worms, so that death was only expected.’ An injection of milk and sugar, and a julep of burnt hartshorn, were given, and four worms were brought away. The following was afterwards applied to the pulse of one wrist one day, and of the other the next. ‘*Ung. Populeon, ℥ij., mix’d with spiders’ webs, and a little powder of nutshels.*’—‘To the stomach was applied *Mithridate*; to the navel, the emplaster against worms. And thus he became well in three days; for which the countess returned me many thanks, and gave me a great reward.’

In this case, we imagine, the only useful article of the treatment was the first; it caused the worms, the cause of the malady, to be expelled: and yet so uncertain was the pathology of the day, that, among other things, applications to the wrist were considered essential to recovery! We may assuredly congratulate ourselves on the *actual* advancement of medical knowledge.

‘*Observ. LXIV.—Leucorrhœa.*—Mrs. Harvy, now lady, very religious,* five weeks after child-birth, was vexed with a great flux of whites, as also pain and weakness of the back, was thus cured:—*R Dates, as many as you please, cut them small, and with purified honey make an electuary.* This she used in the morning. By this only remedy she was cured, freed from her pain, which came often, stayed the whites, and made her fat.’

‘*Observ. LXXII.—Ardor Urinæ.*—‘Baron Compton, aged fifty-five, was infested with bitter pain by the heat of urine, was cured by the following water, often proved by me in this disease:—*R The*

* It is remarkable that Dr. Hall frequently notices the religion of his patient, although we cannot say for what reason he does so. In a short account of his life, prefixed to the first edition, and subscribed ‘E Colleg. Sionis. Julii 1, 1657. Johannes Bird pridem in Academia Cantabrigiensi Medicinæ Prælector Linacermanus,’ it is said of Hall, that ‘such as hated him for his religion often made use of him.’ It is supposed, on good authority, that the Roman Catholics are here alluded to, as Dr. Hall was of the established church.

whites of eight eggs, well beat; cow's milk, ℥ij.; red rose-water, ℔ss.; distil them in a common still. Of this water, R ℥iv.; syrup of alth. Fernel, ℥j.; mix them. It is to be given cold, fasting. And so he was perfectly cured, so that he rode with King James in his progress into Scotland.'

Observ. XCV.—Vertigo.—The following short case places in a very strong light the peculiarity of the ancient practice noticed above.

'One Hudson, a poor man, labouring of swimming in his head, called *vertigo*. I caused ℥x. of blood to be taken from the *cephalica*, purged him with pil. aurear. and cohear. ā ℥ij.; troch. Alkand. gr. viij. f. pil. 7. They gave nine stools. Lastly, he took *peacock-dung* dried, ℥j., infused in white wine for a night, and after strained. And this he continued from new moon to full moon, and was cured.'

No improvement could be made on the first part of this treatment; bleeding and brisk purging will often rout vertigo; yet we see it was thought proper that the patient should take *peacock-dung* every night, for a month, to complete his emancipation from that affection! What makes this more curious is, that *Observ. XI.* of "the second century," relates to a case of vertigo cured by purgatives alone.

Observ. XVII.—Epilepsia.—This observation contains many interesting particulars concerning the approved mode of treating this formidable malady 200 years ago, together with some theory which, whether true or false, would not be generally credited, we imagine, in the present day.

'Mrs. Layton, born of a noble stock, long laboured of a scorbutic epilepsy; always at her first falling into it, it was with a fever, and convulsive motions; the rest of the signs in Engal, fol. 86, and Senertus, fol. 60. In the fit she was most miserably vexed with cold horror, and concussion of the members for half an hour, so that the whole bed shook; the fit lasted ten hours, she not knowing nor feeling any pain. After, in the same day, she laboured of another fit for six hours, and yet was delivered from it, beyond the expectation of the by-standers. After she fell asleep, another fit she had, wherein she said she had cutting pain. She was also afflicted with a jaundice, with diminution of the courses.' I cured her with the prescriptions following:—R *Elect. ventrisflu.*, zvj.; *crem. tart.*, ℥j.; *rhab. pub.* ℥ij. f. bol. It gave six stools. For the jaundice, which was filthy, she took this:—R *Mithridate*, ℥j.; *prepared hartshorn*, ℥ij.; *pouder of worms*, ℥ij.; *conserve of barberries*, ℥j.; mix them, for two mornings; by which she was pretty well delivered from the jaundice. Afterward, I thus purged her:—R *Pil. fætid. Alephang. cock.* ā ℥j.; *agar. troch.* ℔ss.; *castor*, gr. vj.; *cum syr. de Stachad. q. s. f. pil.* 7. She took three of them at night going to bed, and four in the morning. After, I used the following neezing powder:—

R *Nuc. mosch.*, *rad. pæon.* ā ʒss.; *elleb. nig.* ʒj.; *pyrethr. piper. alb.* ā ʒss.; *misc. f. pul.*, a portion of which was blown into the nostrils. Whilst the time of the fits was expected, there was given every morning ʒij. of this opiat:—R *Conserve of scurvy-grass*, ʒij., (which I always used to mix with other medicines in scorbutic affections, to infringe the ill of the disease); *dianthos, conserve of betony*, each ʒj.; *old Mithridate, Venice treacle*, each ʒj.; *misseltœ of the oak, shavings of hartshorn, piony seeds, man's skull pulverised*, each Div.; *mix them.* It is to be taken of itself, or with betony-water, to which is added oil of vitriol. By these she was fully delivered from her fits for many years.'

We should now say this was a case of epilepsy cured by purgatives. In the revolutions of medical opinion, and in some dark age yet to come, *neezing powder*, and the *misseltœ of the oak*, and the *man's skull pulverised*, may again be confided in; for epilepsy is a disease so various in its cause, so alarming in its phenomena, and so obstinate in its nature, as occasionally to overmatch the patience and confidence of those whom it afflicts; and thus no disease has been more the subject of empiricism; and in its cure, whatever is violent, whatever is poisonous, and whatever is disgusting, has been by turns employed, extolled, and abandoned.

Observ. XLI.—Cynanche.—This observation concerns the case of 'the Lord of Northampton, aged about twenty-nine,' who was 'vexed with a desperate squinsy.' His lordship would not allow himself to be bled; and after fourteen stools had been produced by medicines, Dr. Clayton, of Oxford, was sent for; and as the same repugnance to losing blood continued to exist, he applied the following ingenious cataplasm, 'which delivered him from pain and danger.'

R *Swallows' nests, straw, dirt, dung, and all*, n. ij.; *they were boiled in oil of chamomel and lillies; afterward they were beaten, and passed through a seive; to which was added, white dog's turd*, ʒj.; *the meal of linseed and fenugreek*, each ʒj.; *unguent. dialthæa, hen's grease*, each ʒss., and so make a pulstess. It was applied hot.'

We think the Oxford physician could not have better evinced his superiority to the plain country practitioner: yet we should endeavour to judge charitably. It is not improbable that Dr. Clayton recommended the swallows' nests, and the elegant additions to them, from a conviction of the value and efficacy of what he prescribed. The deceptions which attend the practice of medicine are numerous, and hard to avoid; medicaments are given with confidence, and their real and precise effects unnoticed: and it will perhaps be difficult for the critic of 2026, if he should happen, among

the dust of some learned library, to meet with a work written by a physician now residing in the very place where Dr. Clayton practised, to believe, what we assuredly do, that the author really and truly was of opinion that he had discovered in the uva ursi a cure for consumption.

' *Observ.* XLVII.—*After-Pains?*—My Lady Rainsford (beautiful, and of a gallant structure of body,) near twenty-seven, was, three days after her being laid of a child, miserably tormented with pain in her belly, from which I delivered her with the following:—R *The white of hen's dung*, 3j. being put in beer and sugar, she took it.'

We have quoted this chiefly on account of the manner in which the case is related. The case of 'Baronet Puckering' begins by an account of his being 'very learned, much given to study, of a rare and lean constitution.' The religion of the patient, as we have before observed, is often specified; thus we have 'Mrs. Richardson, a Roman Catholic;' the Countess of Northampton is mentioned as being 'notably educated, and of a very good disposition, very fair and beautiful.'

Observ. LI. commences thus: 'Mrs. Woodward, of Avon-Dasset (a maid very witty and well-bred, yet gibbous.)' Then we have the case of Goody-wife Bets, and of Good-wife Archer, of Stratford. Another case begins — ('fair, pious, chaste.')

—We have been inclined to attribute a little of this to the worthy author of *The Marrow of Chirurgery*, who saw no impropriety in publishing these cases in the lifetime of many of the patients, nay, perhaps contemplated some advantage from it, and who seems to have had a wonderful command of language.

Of course we meet with a great many cases of what used to be called scurvy, for which a very great number of herbs were used as remedies. The following commencement of a case shews in what a comprehensive sense the word *scurvy* was employed:—

' *Observ.* LII.—Mrs. Fines, aged twenty-two, 1632 (wife to the Lord Say's eldest son, a very religious, excellent woman), was miserably afflicted with the following symptoms, *viz.* obstruction of the courses for the space of two months; and when she had them, at a fit time in a laudable quantity, they were of an ill, watery colour, with great pain in the womb; there was also difficulty of breathing, with trembling and beating of the heart, as if it would have burst through; after sleep she was sick, with torment of the belly, and knowing about the navil,—but these pains were most miserable about the time of her courses; upon breaking wind she was somewhat eased; her belly was also very hard, and moved, as if with

child ; but hot clothes being applied removed the pain and wind. She was also vexed with pain of the spleen, whites, leanness, pain of the loins, a light vertigo, as also of the scurvy ; and truly I judged all these symptoms to arise from it.'

Notwithstanding this theoretical opinion, however, the case was cured by purgatives and tonics.

' *Observ. LVII.—Hysteria.*—Good-wife Archer, of Stratford, was suddenly taken with convulsion of face and eyes, loss of speech, her matrix carried from its proper place, and so cast, as if she had been the very image of death,—sometimes vehemently opening and casting her eyes hither and thither.'

'To her nose was applied stinking things:' but we do not find, as we expected, that the matrix was tempted by professed sweets to return to its appropriate situation, although this used to be considered a very useful adjuvant, and long continued to be orthodox practice.

Observ. LXXX.—Melancholia.—Cream of tartar freely employed, 'by reason of its great force in contemporating melancholy and *atra bilis*.' Dr. Ferriar recommends it in the same disorder ; and other physicians have ascribed its good effects in dropsical cases to its power of evacuating the biliary vessels : it will, doubtless, in such cases, bring away copious unnatural stools.

Observ. LXXXVIII. contains a case of dyspepsia very sensibly disposed of.

'My lady Beaufou, with indigestion of meat, and wind after eating, with obstructions of the liver, was cured with the following prescriptions :—℞ The roots of docks pithed, ℥iv. ; leaves of agrimony, M. 5 ; the leaves of succory, with the whole, M. ij. : boyl them in three gallons of new beere till half a gallon be wasted ; strain it, and put barme to it ; after put it in a vessell, and into it the following bag :—℞ Sars-parilla, sassaphras, shaveings of ivory, each ℥j. ; seny, polipody, each ℥v. ; hermodactile, ℥ij. ; liquiris, ℥ss. ; galingal, rhubarb, each ℥ss. ; mecoachan, ℥j. ; cinnamon, cloves, each ℥j. : cut them all grosly, and mix them, and put them into a canvas bag, with a stone in the bottome, being put into the beere : tye it at the top of the barrell. After ten or twelve dayes, she took a draught morning, and at four in the afternoon. By this she was well purged, and digested her meat very well.'

This complicated method of moving the bowels in a case of biliary obstruction, is indeed enough to distract the whole company of apothecaries. And here, not without sincere respect, we take leave of Shakspeare's enlightened and pious son-in-law ; the second century containing only eighty-three of his observations, to which his translator appends some, to

make up the hundred, with these prefatory words : ' Thus have I dispatched what I had of the author ; and if I add any more to compleat the century, I hope it will not be offensive.' Although there is something to us offensive in this method of thrusting in himself and his cases, we shall not allow it to prejudice us in our notice of what follows, in pursuance of our intention to illustrate the theory and practice of the times.

' *Observ. LXXXVI.—Empyema.*—Empyema, a suppuration from a pleurisy, hath not yet been mentioned ; I might heap up observations of its cure, both by operation of the side, and by internal means. I myself cured one that had made its own passage without injection, only keeping a leaden pipe, an attractive em-plaster upon it, and the diet-drink prescribed by Riverius, in his chap. of *empyema*.'

' *Observ. LXXXVIII.—Pleuritis.*—Riverius, in *Observ. LVI.*, cent. 1, tells us, after many bleedings, and other ordinary remedies, the fifth day the fever continuing violent, as also the pain in the side, was cured by ʒj. of *frankinsence*, roasted in an apple, and eaten, and after drinking *carduus benedictus* water, ʒiv. Being well covered, he sweat a little, with decrease of the fever ; the next day he sweat much twice or thrice, and he became well. This I made trial of on one *John Fort*, whom I let blood several times, and used both anointing and linctures, yet all prevailed not ; only I repeated *Thus. de Pom.* twice or thrice.'

Ointments of althea and almonds, and of butter and hog's grease, seem to have been much depended on in this serious disease.

Observ. XCII.—Flooding.—A case is related from Riverius, successfully treated as follows :—

' He prescribed frictions and ligatures to the upper parts, cups under the paps, also epythems and pigeons, fomented her hands with hot wine and confect. alkerm., and the following potion :—
℞ *The water of plantain, orange-flower water, and roses*, ā ʒj. ; *syrup of coral*, ʒj. ; *sal. prunellæ*, ʒj. ; *dragon's blood*, ʒss. : *make a potion*. Which being presently given, before the other remedies were performed, yea, within a quarter of an hour, her pain of belly and loins was eased, and her flux diminished ; so that there needed no other remedies.'

Tincture of coral is strongly recommended as ' so helpful' in menorrhagia, ' as that it may be noted as a white stone.'

' *Observ. XCIII.—Ischuria Renalis.*—The stoppage of urine and strangury, *i. e.* pissing by little, as drop by drop, may be joined together ; the one being a total, the other a partial suppression of urine ; the total may be either true or bastard. The latter befell one *Goody Brown*, in *Warwick*, who could not make water

at all; and yet no fullness on the region of the bladder, nor desire to make water. After I had used all means to procure it, as clysters, ointments, cataplasms, and catheter, she died. I opened her, and found her bladder quite empty, and in her kidneys several stones, one in each kidney fallen into the mouths of the ureters, or passages of the urine, like two stopples, so that no urine could pass.'

The presence or absence of inflammatory symptoms, and the mode of death, are not remarked. The latter was probably by effusion on the brain; and for a case in which the most active treatment was resorted to without success, we may refer to the Edinburgh Medical and Surgical Journal for April 1823, in a communication from Dr. Brown, of the Third Foot-Guards, in which case there were the same appearances after death as in the case quoted from our author. A case which terminated more happily, under the care of Mr. Bidwell, of Warbleton, Sussex, is inserted in the London Medical and Physical Journal, 1822.

Observ. XCV.—Syphilis, we observe to have been treated, among other things, by sarsaparilla, sudorifics, and laxatives; and if these failed, by mercurial ointment.

' *Observ. XCVI.—Struma*.—Struma's, vulgarly called the *king's evil*, have been cured as follows, by ZACUTUS, with the following, which he takes God to witness never failed him:—*Take the root of briony well washed, and cut in small pieces; boil it in lbij. of oil, till it be wasted; to the straining add terbentine lbss. wax, ℥iv.; and the vessel removed from the fire; make an unguent.* This he spread upon cloth, and applied it twice a day; if it be not ulcerated, it either mollifies and resolves them, or brings them to supuration. Therefore this ointment draws to itself by little and little the humor turned into *sanies*, cleanseth the ulcer, mundifies, and incarns. If it do not bring away the roots, then put upon the *ung.* a little *sublimate*, like a mustard-seed, for this draws the mucous to itself.' He adds, that, in this manner, "by degrees, although in a long time, they may be happily cured."

We should have had more faith in the assertion of Zacutus, if he had not called God to witness its truth; for, however true it may be of a lover, it is not less so of a physician, that 'if he swears, he'll certainly deceive you.'

' *Observ. XCVII.—Retention of the Placenta*.—ZACUTUS (the protesting gentleman above mentioned) professeth he hath delivered many in this agony, by exhibiting ziss. of the following powder in wine with sugar:—*R Carab. tenuis. pul. 3j.; castor, 3ss.; dictam. puleg. ā 3j.; cinam., 3j.; borag. ʒiss.; spice nard., ʒj.; myrrh, ʒiss.; rub. tinctor, ʒj.; croc., gr. vj. F. pul. subtilis.* Horstius saith, 'by the grace of God I have seen some delivered by the use of that powder, which Forestus recommendeth,

framed of the troches of myrrh, seeds of violets, rad. dictamn. and rasur. dactylorum.'

We do not depend upon any of these at present.

We now come to another division of the work, for which we are indebted solely to the industry of the translator; it is entitled, 'An Hundred Select Counsels for several Honourable Persons, and others, by very eminent Physicians; and all upon *English Bodies*.' From this part of the work, probably the best means of ascertaining the general practice of English physicians two hundred years ago may be collected. The physicians whose names occur, are Dr. Barksdale, Dr. Prujean, Dr. Bates, Dr. Boles, Dr. Willis, Dr. Wright, Dr. Meveril, Dr. Diodate, Dr. Losse (or Loss), and Dr. Napier; but there are prescriptions from others alluded to as 'eminent physicians.' From this part of the work, we might be inclined to extract copious *illustrations*; but as our readers may not feel quite as much interest in them as ourselves, we shall only select a few out of the '*Select Counsels*.'

'*Counsel XXIII. — Paralysis.* — For the palsey, for Simon Archer, being very aged, was prescribed by Dr. Boles what follows:—*Take oil of fox, ʒij. ; of amber, ʒij. : mix them.* With it anoint the whole spine, from the nap of the neck to the *coxis*, every third day. The resolved parts with those near, were anointed with *oil of castor, ʒj., and spirit of wine*, at pleasure. R Candied ginger, beat into a soft elect., with syrup of wood-sorrel. Dose, ʒss. every day in the morning; at other times, oft in a day he took *aq. antepilept. Lang.*, with crums of bread; and sometimes *oil of amber*, six or seven drops, with a knob of sugar. Vesicatories were applied to each shoulder, and kept open. R Pil. aloëphang., ʒj.; ext. rud., ʒss.; castor, gr. iij., cum oxymel f. pil. 4. To be taken twice a week, or at pleasure.'

He had, moreover, we are told, 'a neezing powder,' but seldom used it; and he had also a gargle of vinegar, mustard, pepper, and honey; to be used 'three days before the new and full of the moon.' It will undoubtedly be observed, that in the treatment of this case was employed the method of rubbing the spine which, though with different substances, is now frequently resorted to. We think we know more than one physician who is happy enough to look upon himself as, in some degree, the originator of this practice.

'*Counsel LXXIII. — Abortus.*—For an honourable lady, by an eminent physician, to prevent miscarriage, was directed as follows:—The grinding pains in her back, being so young with child, may be reasonably supposed to arise from the stagnation of suppressed blood in the vessel there, which, either by its abundance or acrimony, quickly acquired by stagnation, may procure abortion. Although there may be, and frequently are, such pains in the back, without miscarriage,

as you may very well know, especially if the womb be not distempered, nor the ligaments thereof weakened. But being her ladyship hath miscarried twice already, there is too much ground to fear such weakness, and the ill consequence. The means indicated are the abatement of the plenty by V. S., the attempering and sweetning that acrimonious acidity, and the strengthening of the parts affected. Bleeding from the arm is earnestly advised; and truly, if the pains do not considerably abate upon her first bleeding, I do advise the repetition of it.

'As to the other two indications, take of the next powder ʒj., in a poched egg, or with a little broth, or other supping, once every day during the pains, either in the morning, or at night, which may most please, or be agreeable. *Take roots of tormentil, red sanders, kermes grains, nutmeg, pearl prepared, red and white coral, each ʒj.; cloves, ʒss.; leaves of gold, 2; pearl'd sugar, ʒij. f. pul.*

'For outward means use the following plaster:—Take galangal, ʒj.; bole armoniac, dragon's blood, sealed earth, each ʒss.; mastich, myrrh, each ʒj.; cyprus nuts, ʒss.; juice of mugwort, Venice ter-bentine, each sufficient; mix them exactly: to which may be further added, red sanders in fine powder, ʒss.; wax sufficient to make a plaster. Of which spread one, and lay to the back. These being observed, miscarriage was prevented.'

In this case may be observed a singular mixture of good and of useless practice. The reasoning concerning the origin of the pains and miscarriage is probably correct, and the venesection prescribed highly judicious, although cupping on the loins might have been still more serviceable. As for the internal use of the tormentil, the red and white coral, and the leaves of gold, its advantage is at least questionable; and we cannot bring ourselves to think that much advantage was derived from the plaster to the back.

These extracts will suffice; for the Select Counsels are, on the whole, rather old-womanish affairs. We have selected the best. The rest are chiefly recipes for scurvy, scorbutic headach, scorbutic menorrhagia, scorbutic colic, &c., treasured up by the worshipful Mr. Cook to make up a show, but such as most old ladies, and many housekeepers in ancient families, could now parallel. The translator of Dr. Hall seems to have been '*un véritable apoticaire*;' his language is less elegant than that of his original,—and he is evidently a mere routine practitioner. He very justly thought he enhanced the value of his own part of the work by a few words on the *ars cosmetica*, collected from 'a maid of the Dutchess of Orleans,' who was 'eminent for cosmetics;' and other persons of dignity. We cannot resist noticing a very important

'*Pomade for the Face.*—Take six dozen of sheep's feet; break

the bones, and take out the marrow; then boil the feet well, and scum off the oil that rises, and save it in a new pot, with the fore-said marrow; to which put the four great cold seeds, peel'd and beaten well, and mixed with the marrow. Then take the rind of one *citron*, twopenny worth of *borax*, three cloves of white lilly roots well beaten, a little white rose-water, or plantain-water; boil all together for the space of two hours; then strain it into a dish of spring-water, and wash it with divers waters till it be white. Use this at night.'

To this follow, an ointment for greasing the inside of gloves to whiten the hands; pomatum to make the hair grow; lotions for red faces, composed of verjuice and litharge of gold; equal parts of aquafortis, fair water, and honey, to make the teeth 'as white as snow;' and, *à contrario*, lotions to make the hair as black as jet; the last consisting of water coloured by black-lead, recommended as having been 'used by an honourable countess, and a lady; nor was it possible to discern the colour, though both their hairs were as red as foxes.' 'Their eye-lids were coloured with the steam of a candle, gathered in a pewter, and put on with a small sponge.'

We recommend the consideration of these details to those melancholy moralists who have any propensity to declaim on the progress of luxury and the depravity of the times. Here, close upon the days of 'good Queen Bess,' we find the ladies of the provinces emulous of the ladies of the court, having curious and valuable cosmetic wisdom, through the agency of apothecaries and ladies' women; and at a time when, however learned they might be, there is reason to fear there was not much refinement of manners, or attention to cleanliness; endeavouring to mitigate red faces and coarse hands, to raise up hair in barren places, to shame the hoary head of age with a solution of black-lead, and to enthrone voluptuousness in the eye-lids, by means of the smoke of a tallow candle.

If we were not apprehensive of being reflected upon for dwelling too long on this subject, we could furnish the medical reader with much amusing and curious information from several parts of the work which we have passed over without notice. We have perhaps already quoted more than enough for any useful purpose. On reviewing the *cures* of Dr. Hall, and the *select counsels* collected by Mr. Cook, we derive at least this conviction from their labours, that although our knowledge of diseases is much more exact than it was in that era of medical practice, the treatment of diseases differs less in principle than in form from that which was prevalent two hundred years ago. That such should be the case is, how-

ever, not so remarkable, as that the same observation may be applied with reference to those who practised physic two thousand years since. But in the practice of that remote period, we find a general simplicity and freedom from vulgar error and gross folly, which cannot be observed of the practitioners of this country in the reigns of Elizabeth and of James, when many theories were gravely entertained which would have been detected and scorned for their absurdity by the physicians of Greece and Rome. To explain the causes of this difference would require a very attentive examination of the history of physic; and, after all, though to trace the successive steps by which the practice of medicine, from being simple became mystified, and from being complicated became plain, might lead to curious views of the human mind,—the advantage to be derived from it would but poorly repay the toil. But we ought to learn a lesson at once of humility and caution, when we find men of undoubted learning, and whose minds had been diligently exercised in the schools, ignorant of what passed daily before their eyes; and apparently blind to the most palpable connexion between common causes and common effects; as, for instance, between the decided action of emetics and purgatives, and the prompt disappearance of the multifarious diseases dependent on a neglected state of the intestinal canal, the effect being in this, and in many analogous examples, attributed to some idle ingredient, prescribed from habit, prejudice, or superstition. There was, however, one cause, which, doubtless, long had the effect of excluding any precise knowledge of the effect of remedies. When it was not at all uncommon to prescribe twenty or thirty ingredients in one mixture, it was of course no very easy matter to decide which were entitled to commendation; which were superfluous, or even which were noxious; nor was this important kind of discrimination quickly or easily acquired. By degrees, however, one superfluity after another has been discarded, until regular practice has at least reached its acme of simplicity, though not of perfection. Occasionally, however, in the practice even of the days to which these peculiarities belonged, we find unexpected instances of very straight-forward and simple practice, and are not very well able to account for what seems a singular and almost a capricious departure from the custom of the period.

Of the present state of what may be called the literature of physic, we have never professed to think very highly; and although at first sight it may appear that the language of Dr. Hall was often more coarse and inelegant than that of any physician of the present day, we would beg to remind

the reader who would take this agreeable view of the improvement of medical writing, that our quotations are the composition of a translator, whom we should not be justified by any tradition in regarding as a fair specimen either of the learning or the elegance of the medical authors of his time.

III.

OF THE PRINCIPLES OF DENTAL SURGERY.

Principles of Dental Surgery, exhibiting a New Method of Treating the Diseases of the Teeth and Gums, especially calculated to promote their Health and Beauty, &c. &c. By LEONARD KOECKER, Surgeon-Dentist; Doctor in Medicine and Surgery, &c. &c. London, 1826. Pp: 445.

ALTHOUGH several works have appeared upon the natural history of the teeth during the last half century, and in this department of science much information has been obtained, the treatment and general management of the organs have usually been committed to men whose opinions and whose practice have been merely empirical. They have trodden the same dull round through a long series of years, and have laboured but little to improve the principles of an art which has been degraded below its proper level, only because such individuals have exclusively exercised it. It has consequently been separated, as it were, from the general practice of medicine, and (in spite of facts, which would not but occasionally present themselves, and which compelled an acknowledgment, that the teeth and the constitution reciprocally act upon each other,) scarcely any attention has been paid to them in the treatment of disease. The volume of Mr. Koecker, though directed principally to the teeth, proves the great advantage of studying a single branch of medical science, after having acquired a knowledge of the general principles of the whole; and if not without faults, which we may point out, is certainly a better work, and more generally instructive, than any other we are acquainted with. He has discussed more particularly the relations of the teeth with the other organs of the body, and the consequent necessity of having a reference to the state of the dental apparatus in many different maladies.

Much dispute has taken place as to the vitality of the teeth; and it has been justly observed, that Mr. John Hunter's opinions upon this subject were very vague. He considered them 'as extraneous bodies with respect to a circulation through their substance,' although the experiments upon which he relied, appear to us, as they have done to others, to

refute his own assertions ; for he found that growing teeth do become tinged with madder,—and hence, therefore, in one period of their existence there must be vitality. Dr. Blake also proved, that the colouring matter is subsequently absorbed, which with us decides the question : but taking Hunter's experiments alone, the fair deduction is, not that when growth is perfected all circulation ceases, but that it is diminished, because we see the very same process, but in a less degree, take place in common bone. It is easy to inject a growing bone ; but a bone of perfect growth is far less vascular, and less easily admits the injecting matter. De Blainville, in the *Nouveau d'Histoire Naturelle appliquée aux Arts*, calls the tooth itself the excreted or dead part, ' la partie excrétée ou morte ;' but without any proof of the accuracy of the assertion. This has, therefore, only the weight which naturally attaches to the opinion of a celebrated man, but which must always yield to fact. M. Serres has taken rather a middle course, and maintains, that the structure of the teeth is not the same with that of common bone.

' Every thing induces me to think that the structure of the teeth is not the same with the structure of the osseous system. A comparison of their properties will illustrate this opinion.

' 1st,—The bones are preceded in their development by a cartilaginous state ; the teeth transude from the surface of the pulp, and have no intermediate state.

' 2dly,—The bones are enveloped in a periosteum, which forms a kind of sheath; the teeth have none; the enamel appears to hold its place externally.

' 3dly,—The maladies which affect the osseous system in general, as rickets, which soften and destroy, do not act upon the teeth ; this system remains untouched in the midst of a general disease of the osseous system.

' 4thly,—If we plunge the proper substance of the tooth, and a piece of common bone, into concentrated nitric acid, the first is not touched, and the latter is destroyed.

' 5thly,—By calcination, bone gives a white residue, of which phosphate of lime appears to be the base ; the tooth is transformed into a blue residue at a higher degree of heat, and its base appears to contain more carbonate of lime.

' 6thly,—Bone is destroyed in the earth much more rapidly than teeth ; in extra-uterine conceptions bones are dissolved, and teeth remain untouched.

' 7thly,—Bones are penetrated by a number of vessels ; the teeth are not.

' 8thly,—The diseases of the teeth and bones have not the slightest analogy.'—SERRES *on the Teeth*.

Now, though some of the circumstances here mentioned are rather assumed than proved, particularly the seventh,

that bones are vascular, and teeth are not; yet we think that they do prove that the structure of the teeth and bones are different, but not that therefore the former are wanting in vitality. In what exactly this difference exists, whether in a simple closer apposition of the component particles, in any modification of their vascular and nervous structure, in a variation in the earthy part of the two systems, or in all of these together, we know not, but every circumstance proves to us, that we must regard the tooth as a living part. That a tooth may be drawn and replaced, and retain all its former usefulness, will not prove the contrary; because late facts shew that the same thing will happen with soft parts; but with one as the other, these are rare cases, and exceptions to a general rule, according to which, both having been once separated, become insusceptible of a vital function. The soft part putrifies, and is not retained; the tooth dies, and if retained, becomes a source of irritation. We have introduced this discussion because we know that it is really a widely spread opinion among the profession that the teeth are dead parts, and may be treated accordingly. Mr. Koecker, without entering into the dispute, merely gives his own opinions, after describing, generally, the structure of the teeth and the lining membrane.

‘The lining membrane of the teeth depends, almost altogether, upon their membrane; and if the life of this membrane be destroyed, the tooth will become not only extraneous, but a noxious body.

‘Notwithstanding, therefore, that the teeth consist of the hardest and most solid bony texture, they are, nevertheless, organised, vascular, and interwoven with nervous and external fibres.’

The teeth are at all times liable to disease, but, according to Mr. Koecker, much more in their growing than their perfect state, and the influence of the constitution is then more striking. So far, indeed, does the author carry his conviction of this point, that he regards the possession, in after life, of a sound set of teeth when the general system is wasting with disease, as a clear indication that the constitution was originally good. For from their structure, when once perfected, they are less easily operated upon by constitutional causes than other bones, and for the same reason they possess less power of reparation. If, therefore, in early life they should become imperfect, such they will remain, however much invigorated the general health may be; and, *vice versâ*, they will continue perfect long after less dense structures shall have yielded to a destructive malady. The facts certainly are such as Mr. Koecker has stated, and we are ourselves inclined to accede to his explanation.

The causes of the diseases of the teeth are general and local. The general causes are all those which affect seriously the whole corporeal system, or any one part of it. There is no question but that both the teeth and gums become diseased in severe fevers. The accumulation of sordes in the mouth are disordered secretions of the parts, although excited originally by the functional disturbance of the *primæ viæ*. That after recovery from fever the teeth often rapidly decay, is well known to every physician of common observation, nor can we doubt that the foundation of their destruction had been laid by the previous malady. It does not often happen, either, that in scrofulous habits the teeth remain sound, and perhaps they are unhealthy when they first issue from the gums. We have often observed extensive ravage in the first teeth of very young children who have been affected with mesenteric disease, so that, at between three and four years of age, they have been harrassed with dreadful tooth-ach. Mothers often become aware of the connexion between the soundness of the teeth and the general health; and more than once we have been applied to with alarm on the part of the parents upon the appearance of caries in these organs, because they had observed the same circumstance in other children before an attack of marasmus, that eventually terminated fatally. In phthisis pulmonalis, where its duration is long, the teeth very commonly decay; and we can call to our minds several instances of the almost total destruction of the dental apparatus in this disease, and this in very young persons. Mr. Koecker remarks, that during pregnancy caries of the teeth proceeds more rapidly than at other times; and though we cannot from our own observation confirm the accuracy of the observation, the excruciating pain that is so common in this state renders it highly probable.

Diet and regimen are other general sources of diseased teeth, equally, as they are sources of disease in other organs. The indulgence in spirituous liquors is likewise unfavourable to the original development and after preservation of the teeth, and dram drinkers are not often possessed of a sound mouth. Mr. Koecker attributes something also to climate; and the opportunity he has had of practising in different regions, constitutes him, probably, a very competent judge. His opinion of the influence of marshy and low countries certainly corresponds with our experience. The influence of medicine is of course the same on these organs as upon others; properly administered, it serves to their preservation; improperly, to their destruction. It unfortunately happens, however, that the latter is far more general, and that from carelessness. Medicine highly proper for constitutional

disorder may be injurious to the teeth. We allude, particularly here to the administration of acids, which act chemically, and require great caution to prevent mischief. We know, at this time, several young women who have lost their teeth entirely from the imprudent exhibition of the acid infusion of roses. It had been continued without any notice of its effects for two or three weeks, to the destruction, in the first instance, of the beauty of the teeth, by removing the enamel, and afterwards to their almost total loss by caries. But we have known much less time suffice, nor do we ever now order it ourselves without giving strong admonitions to wash the mouth afterwards with an alkaline solution. We are afraid that the following remarks of Mr. Koecker are too generally applicable.

‘ But medicines are dangerous weapons in the hands of the ignorant. When we consider how very small is the proportion of medicine which is administered by persons of skill and science; that people are in the habit of prescribing indiscriminately for themselves: if also we reflect upon the many abuses to which medicine is subject by being administered by persons ignorant of some of the most important properties of the drugs which they take upon themselves to prescribe; when we consider the difference which is produced by the best medicines, when skilfully administered, upon different constitutions, and that when they are unskilfully administered they act rather as poisons than as medicines,—there will seem to be neither rashness nor uncharitableness in our attributing a large proportion of the local and general diseases of the system, and consequently of the teeth, to the abuse of medicines.’

Of local causes of diseases of the teeth, the accumulation of tartar is both the most frequent and most destructive. Its action, however, is more upon the gums and alveolar processes than upon the teeth themselves. ‘ It acts directly chemically in the destruction of them, whilst by its mechanical and irritating influence it is rendered indirectly more destructive to them; it being one of the most powerful causes of diseases in the gums, periosteum, and alveoli.’ It is by this substance having accumulated, oftener than by any natural and inevitable decay of the alveoli, that old persons lose their sound teeth, and the removal of the tartar is, in such cases, frequently sufficient to cause loose teeth to regain their firmness, even when the socket is half absorbed, thus leaving a great portion of the tooth exposed. It is often also impossible, without a reference to the teeth, to remove some of the more aggravated cases of dyspepsia, especially those in which there are slight aphthous ulcerations of the tongue and roof of the mouth. M. Piorry has lately made some observations upon the effects of *carious* teeth upon the neighbouring

parts;* but the truth is, that the mere accumulation of tartar, *without caries*, will be productive of many of the same evils. So fully, indeed, has our experience convinced us of this fact in particular, that we have felt the want of a dentist a deficiency in our public dispensaries, while surgeons will continue to neglect the diseases of the teeth. The poor are even more than the rich subject to them, while they are less aware of the causes that produce them. The origin of tartar is generally referred to the saliva, and thus this fluid becomes also a source of disease in the teeth. It is, we believe, also true, though not mentioned by Mr. Koecker, that this substance is always most abundant round those teeth which are opposite to the opening of the salivary ducts. Here is the author's opinion of the effect of the saliva.

'The saliva, when in a degenerated or morbid state, forms likewise an active cause of disease in the teeth, by its permanent chemical influence upon the parts of the mouth generally, as well as by the greater predisposition to the deposit of tartar possessed by this fluid.'

Of the chemical nature of tartar we know nothing, nor are we aware that it has ever been submitted to chemical analysis. External remedies are ranked by Mr. Koecker as local causes of diseases of the teeth; and there appears to us so much truth in his observations that we shall not weaken them by employing any other language than his own.

'Tooth-powders, tooth-pastes, tinctures, essential oils, and mixtures of all kinds, &c. employed without proper judgment, are so many causes of diseases of the teeth and gums.

'All kinds of dental operations performed either in an injudicious or unskilful manner, even the improper use of tooth-brushes and tooth-picks not excepted, act like any other causes of irritation, and are consequently productive of divers diseases of the teeth.

'The local causes, whether physical, chemical, or mechanical, almost invariably act in a more direct manner upon one set of these parts than upon all the others. Either they attack, first, the gums, the periosteum, alveoli, and maxillary bones, or the teeth themselves; and in the beginning they produce primary affection upon some one part particularly, while they act in a more indirect way and less powerfully upon all other parts.

'Of all the external causes already mentioned, none, however, are more active, and none have a greater and more morbid influence upon all the parts of the mouth than unskilfully performed operations, such as cleansing, scaling, filing, cutting, stopping, or plugging and extracting the teeth; but the most cruel and destructive of all morbid causes which are known in dental surgery, are those recommended by Messrs. Hunter and Fox, and

* See No. XIII. of this Journal, page 62.

others; viz., of destroying the nerves of the teeth; of replacing a tooth in its socket after its previous extraction; of transplanting teeth from the mouth of one person into that of another; of applying the actual cautery for arresting hæmorrhages from the socket after the extraction of a tooth; of using ligatures for retaining in their places artificial teeth, or such diseased teeth as are loose, or rather the sockets of which are destroyed by diseases; and, lastly, that of inserting artificial teeth without the necessary surgical principles, and great judgment and skill.'

These observations are truly valuable, and will, we trust, have much weight in preventing many of those operations, which, though sanctioned by so great a name as that of Hunter, must, in the present day, have appeared to a reflecting mind exceedingly irrational. The probability is, indeed, that in this, as in the other departments of surgery, increased knowledge will substitute delicacy and skill for coarseness and force; and that in proportion as a sound practical knowledge is more diffused, prevention will be more generally obtained, and gentler remedies more commonly employed.

Mr. Koecker has discussed, at some length, 'the effects of diseased teeth upon the general constitution,' and has quoted some remarkable instances as illustrations from Dr. Rusp's works, and the *Bibliothèque Germanique Médico-Chirurgicale*. Of the fact that very extensive sympathies do exist between these organs and other parts of the corporeal system, there cannot be any doubt; and wherever diseased teeth are present, they ought to be remedied or removed. Observations are still, however, wanting on this point, before any more accurate directions than these can be given in practice.

The office of the dentist, under the present system of the division of labour, is almost exclusively operative, but in order to render his operations successful, it is highly important that they should be rightly timed. Instances have occurred where even fatal tetanus has succeeded to imprudent extraction of a tooth, when the operation had been performed without reference to the state of the mouth or the circumstances of the constitution. The observations of Mr. Koecker on this point are very excellent, and shew that he well understands the subject upon which he writes.

'The principal curative means,' he observes, 'in the possession of the dentist, are operations, many of which cannot be performed without producing considerable irritation, and hence, if they are performed at an unseasonable period, instead of curing the malady for which they are instituted, they serve to aggravate the disease, and to produce the most injurious effects, not only upon the teeth, but also upon the parts contiguous to them.'

The great difficulty in these cases is very much dependent

upon the complicated nature of the diseases in which the teeth are involved. It rarely happens that any one part is affected alone; but the gums, the teeth, the alveolar processes, are often diseased together; the constitution also itself suffering in a greater or less degree. Now it must be difficult to decide, in such instances, where we ought to begin; for sometimes the constitutional affection is predominant, and sometimes the local; or it may be that the former is entirely dependent upon the latter. We have known cases, and indeed they frequently occur, where general remedies are utterly useless till the local affection of the gums and mouth has been relieved, and here, therefore, the operation must be performed immediately. On the other hand, in this, as in other surgical operations, the general system may be in such a state of irritation, that though the operation itself be exceedingly proper, it might be dangerous in the extreme to perform it till the morbid excitement of the constitution shall have been allayed. The directions of the author on this head are so judicious, that we quote them at length.

‘ In such complicated cases, it is particularly necessary that the dentist should first inform himself of the several causes, and the manner in which they have operated, whether quickly or slowly, in destroying the parts; for in the removal of these causes, which is not to be effected without successive operations, the ultimate success of the whole treatment almost entirely depends upon the skilful and judicious order in which such operations are performed.

‘ The removal of the local cause is generally attended with more or less local irritation and pain, and should this irritation be greater than the parts or the system in general can support at the time, injury, rather than benefit, will be occasioned by the operation, and new causes of diseases will thus be added to those already existing.

‘ But if, on the other hand, in very complicated cases, those morbid causes which act together upon the same parts, and which may be considered as one class or set of causes, are not removed at the same time, or at least in a short space of time, the good effect of the partial treatment is frequently frustrated, either by the loss of time, or by the irritation produced by the incomplete operations, and by the increased morbid actions of the remaining causes.

‘ The great object for the best plan of cure is not to fall into any extreme, but to avoid equally dangerous precipitation and delay.

‘ To attain this view, it should be an unexceptionable rule to remove, *in the first place*, such exciting causes as produce the most extensive morbid influences upon the teeth and their relative parts, and that the remedies employed for that purpose should be such as are least likely to irritate, and most calculated to remove every symptomatic inflammation in the teeth. *In the second place*, those causes which act more particularly upon them should be subjected to surgical treatment.

'Of these exciting causes none are productive of more extensive inflammation in the teeth, gums, &c., or, indeed, more destructive to the constitution, than acute constitutional diseases; and few local inflammations occasion, perhaps, greater symptomatic derangements of the whole system, and of the teeth generally, than acute inflammations of the gums, sockets, periosteum, and maxillary bones, and particularly of the lining membrane of the teeth; consequently all these acute diseases, either general or local, should be first considered in the treatment, in order ultimately to secure the restoration of the health, as well of the general system as of the teeth and mouth.

'The next consideration should be the removal of the chronic symptomatic affections of the teeth, and the parts connected with them, by a proper treatment of all chronic idiopathic maladies of the gums, periosteum, alveolis, and maxillary bones, which have the same hurtful effects upon the system in general as upon the parts locally connected with those affected.

'The proximate causes and the diseases of the teeth, such as caries in its first stages, irregularities and deformities of their bony structure, &c., as they produce the least symptomatic affection upon the teeth and other parts, should be *the last objects* of treatment; for instance, as it regards those teeth which are the chief object of preservation in the treatment, no operation should be performed upon them until they are freed from all inflammation; and this, of course, cannot be the case while the parts, or the constitution in general, are suffering from any primary disorder.'

To these directions we consider it unnecessary to add a single remark. Contrary to what has been inculcated in books of midwifery, Mr. Koecker does not consider pregnancy as precluding the extraction of teeth, nor any other operations upon them, provided they are performed with due regard to the state of the general health. The circumstance, however, mentioned by Mr. Travers, that utero-gestation is unfavourable to the success of other operations, ought to render us doubly cautious, when, at this period, the teeth or gums are their object. If, however, the pains of the face are excited by dead teeth, or merely roots, we cannot, we conceive, be much question of the propriety of removing them. But when the teeth are nearly whole, or when the carious part is not visible, and extraction from size and position of the tooth is difficult, we should rather advise a simple antiphlogistic plan, and indeed this ought always to be pursued in pregnancy for some time before any operation is attempted. We should at least remember, that one fatal consequence from thus interfering far outweighs the mere relief that may have been given to hundreds of others, especially if the chance of such consequence had been previously recognised. Though not, therefore, prepared to oppose ourselves to *the experience* of

of Mr. Koecker, we must enjoin the extremest caution in adopting a practice which has been long held dangerous by the profession, and from which analogy leads us to fear that mischief may ensue. We refer more particularly, however, to extraction, though, in a more limited degree, our observations are equally applicable to minor operations.

The chapter on the preservative treatment of the teeth and gums is deserving of great attention, inasmuch as prevention of disease, at all times preferable to cure, is especially valuable in the affections of organs which, like the teeth, possess very small powers of reparation. As general and local causes produce the maladies of the teeth, so must general and local remedies be employed in their treatment. It is, however, to the consideration of these last that we are here to confine ourselves; the former belong essentially to the physician, who, at least, ought to know when the latter are required. Mr. Koecker has given one admirable proof that this is a duty, when alluding to the exhibition of medicines which are considered injurious to the teeth; and he asserts, and we believe correctly, that the loss of teeth after salivation is not so much owing to the medicine as 'to the neglect of a timely application of proper dental assistance.'

The remarks upon the proper plan of cleaning the teeth, the kind of brushes to be employed, and the qualities of the tooth-powder, are well deserving attention. As the principal object is to prevent any accumulation of tartar, these he maintains must be all modified according to the tendency to a deposition of tartar, and the situation in which it is deposited. Where, likewise, the gums will bear it, hard rather than soft brushes are recommended.

One of the most interesting and important parts of the volume is that which has for its subject, 'the treatment of the teeth and gums of children at the time of the second dentition,' as upon the proper practice at this period much of the health of the mouth in after life depends.

The first thing to be done is the removal of those teeth whose fangs are too slowly absorbed by nature, even though not carious. The only proof, however, that this is the case, is the protrusion of the corresponding permanent teeth through the gums, or, at any rate, their development to such an extent that their presence and direction may be fully ascertained. Should the first teeth be drawn before this time, there will be danger of extracting the permanent teeth with them, for at first they are both firmly attached to each other, and enclosed in the same socket. It is to this accident, we apprehend, that the occasional absence of second teeth is to be referred, several instances of which have come to our

knowledge. For the same reason, carious teeth in the first set are not always to be extracted immediately, but only when this is demanded by circumstances exclusive of the mere disease of the tooth: thus, the manifest presence of one of the permanent teeth beneath it, its juxtaposition to these last, particularly if the carious part is in contact, or if, what has never happened within our experience, the gums should become diseased from the irritation of the carious tooth. All dead teeth should be extracted at once, as these are to be considered as merely extraneous bodies, and their presence is only a source of morbid irritation. Where the constitution is healthy, and the permanent teeth are regularly placed, this is all the management that will be required during the progress of the second dentition. But they are frequently irregular, and nothing tends so much to the excitement of caries and the final destruction of the dental apparatus, as irregularity either of their figure or situation. In remedying this, however, a little judgment and skill is required; and often it is necessary to draw teeth which at the time appear little to require extraction, in order to prevent their general decay. The most important indication is to prevent a crowded state of the mouth, and for this end some of the teeth must be extracted. Now the incisors and the cuspidati are so essential to all the purposes which the teeth serve, that nothing but extensive and irremediable disease will justify their removal. Neither, in Mr. Koecker's opinion, ought less regard to be had to the bicuspidati, and in this there can, among reflecting minds, be no difference of opinion.

'The first molares are generally most predisposed to disease; they are least important as it regards both appearance and utility, and so situated as to afford, by timely removal, sufficient room for the anterior teeth, as well as for the second and third molares. If these teeth are extracted at any period before the age of twelve years, all the anterior teeth will grow more or less backwards, and the second and third grinders so much towards the anterior part of the mouth, as to fill up almost entirely the vacant spaces caused by the removal of the first molares. . . . By this method, all the teeth will take a proper situation, and will be improved in strength and health, and particularly the dentes sapientie, which will sometimes penetrate the gums much sooner, and prove of larger size and possessed of greater firmness than usual. . . . I must particularly observe here, that to obtain these desirable effects, it will be absolutely necessary that all the four molares should be extracted, and, if possible, at the same time, or at least with very short intervals interposed.

'The partial removal of these teeth will, in most instances, not only be entirely useless, but even become the actual cause of such

irregularities as are sometimes totally incurable at a later period of life.'

The early removal of caries from any of the permanent teeth which it may have attacked, is another necessary part of the plan for preserving the teeth, and preventing the extension of the disease; and if this method is steadily pursued in early life, Mr. Koecker seems to consider as nearly certain that a sound state of the remaining teeth will be maintained.

The evil consequences that often ensue from the presence of carious and dead teeth in the jaws, are so well known, and so very readily traceable to their source, that we deem it unnecessary to follow Mr. Koecker into this part of his subject. The only other sections which we shall notice are those upon hæmorrhage after extraction, and upon stopping the teeth.

His theory in the first of these is very little worthy of notice, but his practice we believe to be correct; yet, at the same time we must say, that we have never ourselves known any cases of such aggravated ill-treatment as those he refers to. Obstinate and even fatal hæmorrhage has occurred after the extraction of a tooth; but that this has been always owing to mal-treatment we do not believe. No candid person could maintain, that in the instance of fatal hæmorrhage after extraction, related by Mr. Blagden in the eighth volume of the *Medico-Chirurgical Transactions*, the slightest blame could be attached to the operator; the whole circumstances of the case prove the contrary, even had it not been superintended in great part by Mr. Brodie, whose name is a sufficient assurance, that every thing that surgery could effect would have its full trial. We have dwelt a little upon this, because in the following sentence an insinuation is made utterly unworthy a liberal mind. Has Mr. Koecker any real cases to bring forward? let him do so,—and not by a paltry innuendo throw a general slur upon the profession. His own method is simple pressure—we believe it to be the best; we are certain, that in the case above alluded to it would not have been efficient. After alluding to the various methods employed in that case for stopping the hæmorrhage, though he does not mention the case itself, he says:

'There are several cases on record, and well known in London, which would prove the inefficacy of such treatment; but from their fatal termination delicacy and forbearance prevent me from making any further reference to them.'

In the other section, that on plugging the teeth, we are again fortunate enough to agree with him. The proposal of Mr. Fox for plugging the teeth with melted metal, has always

appeared to us extremely irrational, and the observations of Mr. Koecker consequently very accurate.

'It is in accordance with Mr. Fox's own theory, as it must be with that of all just physiologists, that the bony structure of a tooth is of a vascular nature; hence after the diseased part of a tooth has been cut out of the carious cavity, the new and healthy surface thereby exposed must be particularly susceptible of external irritation at such a time. The metal, therefore, introduced into this cavity at the temperature of boiling water, will not only destroy the vitality of the living fibres, but also the whole surface of the healthy bone, and thereby reproduce some dead bony substance, and caries, the very disease intended to be cured by it, which will inevitably destroy the tooth.'

What we have said is sufficiently indicative of our opinion respecting the author's ability. We certainly believe that he understands his art, and his book contains much valuable matter; but it still remains for us to give a character of it as a whole. We must confess, that it was with some difficulty that we persuaded ourselves to peruse it, so little alluring is its general execution. It might unquestionably have been comprised in little more than a quarter of the number of pages it now occupies, without the loss of a single valuable observation. It contains much of what Mr. Canning, on a somewhat more serious occasion, termed 'the figure called rignarole,' and has not unfrequently a tang of the quack. This may be somewhat unexpected blame to Mr. Koecker himself, who expresses on every possible occasion his abhorrence of quackery, and 'deems it his duty to expose it to the utmost, and without any reserve, wherever he shall meet with it.' If Mr. Koecker, however, supposes that ignorant men alone can be guilty of quackery, he certainly much mistakes the meaning of the word. Under it is comprehended all practices for the attainment of business that are unworthy the members of a liberal profession; and such, without doubt, are all advertisements, direct or indirect.

Now, under the description of an advertisement very much of this volume falls. We are told of successful cases without number, and without any bearing upon practical points, when other celebrated dentists had failed; we are informed that he has one hundred and seventy instruments for stopping carious teeth, without any description; that he has many to which others have none similar; that Dr. Physick has recommended his advice to be taken; that the 'sagacious and disinterested Mr. Laurence' has sent him patients; and, finally, that he writes not for 'literary fame,' but 'the best interests of humanity.' Had Mr. Koecker done nothing better than this, we certainly should neither have noticed him nor his book;

but we have honestly praised him where we have thought praise to be due; and we shall as fearlessly blame him for that part in which we feel he deserves it. So little are the world able to judge between the artifices of ignorant pretention and the bearing of real science, that it is doubly the duty of those who possess the last to hold nothing in common with the former. Dr. Rock, or any other of the celebrated quacks of the last century, could, as all of the present can, puff as readily as Mr. Koecker, and how are the public to discern between the one and the other? They cannot, and sensible men out of the profession are guided in their decision by the absence of all attempts to impose on their understanding by empty boasting. With them boasting is an indication of ignorance, and rightly so; for rarely indeed does it happen that a really well-informed man is not modest in proportion to his acquirements. He makes no great promises, nor easily blames others for bad practice,—the uncertainty of science makes him feel that a thorough knowledge of every circumstance can alone enable him to judge decisively. If Mr. Koecker has been led into his present line of conduct by ignorance of our habits of thinking, let him in a future edition curtail every thing that is not intimately connected with the subject of which he treats. He may be assured that his volume will then be more frequently read; and by many who would now lay it down, after the perusal of a few pages, with the conviction, although wrongly, that the whole was the production of a vain-glorious pretender.

IV.

STATE OF THE MEDICAL PROFESSION.

An Exposition of the State of the Medical Profession in the British Dominions, and of the Injurious Effects of the Monopoly, by Usurpation, of the Royal College of Physicians in London. London, 1826. Pp. 373.

THAT the present time approaches very nearly in its character to that troublous period of the seventeenth century which terminated in the murder of the monarch, every succeeding day is making more manifest. Publicity, while it renders one class of men more circumspect, awakens another to a sense of grievous oppressions; and there is scarcely a single rank of society which has not discovered such lists of wrongs inflicted by their superiors as were never before heard of, much less tolerated, in a civilised nation. We seem at once to have learned, that all those obstacles that were hitherto thought only the necessary proofs of desert, are spo-

cimens of atrocious injustice; and that if *a man proclaim himself* deserving, every avenue of honour ought at once to be opened, every reward of merit ought immediately to be conferred. The experience of past ages is regarded now as nothing; intellect in its rapid march is making gigantic strides, and far surpassing all, individually and collectively, that has ever yet been witnessed by the world. Thus, therefore, every institution is regarded, not as an object which, having grown from the habits and prejudices of men, is suited in some measure at least to their wants,—but as sources of oppression, inconsistent equally with the manners and the intellects of the people. Without entering now into the general question, which is exclusively political, although we pretend not to hesitate in our opinions respecting the real tendencies of the prevalent, and we may say fashionable, opinions of the day, we cannot but attribute the institutions of a people as naturally to their general spirit and intelligence, as we infer the previous labour of an architect and builder from the existence of a house. It is true the habits of men may and will be modified by their institutions; but it is equally true, that institutions will always respond to the common temper of a people. Consistently with this opinion, we believe that nothing exists openly in a country which has not something in it suitable to the prejudices and wants of the inhabitants, although in particular points an establishment may not be in accordance with the spirit of the times. Upon this principle we have been accustomed to consider every thing around us; and if we have found a custom bearing hard on some individual object, we have sought rather to modify than to destroy; to remove the evil, but not to overthrow the building. Having thus premised upon what principles we judge of every attack upon the established order of things, we proceed to the subject which is more immediately the object of the present article.

The medical profession, though not very readily excited, has at length participated in the predominant love of innovation and reform; and were we to judge of its general respectability and intellect by the proceedings of the rabble who have arrogantly and falsely styled themselves its representatives, it bids fair for equalling, if not surpassing, the radical exploits of the Hunts, and Cobbetts, and Hobhouses, of the political world. Among the works to which this state of things has given rise, the volume at the head of this paper is one of the most respectable, as well as one of the most able; but it appears nevertheless to us to have made some mistatements, and to have drawn some incorrect inferences. One of the mistatements is, that the College of Physicians has

established a monopoly of medical practice. That it may have attempted to do this, may be true; that they have effected it, is evidently not so; for the greater share of medical practice is in the hands of apothecaries,—and many of these are equal, if not superior to the physicians. Neither is it important to the people, whether they are attended by a graduate or not, provided the attendance is in either case equally good; and such it certainly is generally believed to be. Equally incorrect also do we think the inference, that the fellows should be compelled to admit the licentiates to a part in the government of the College, because we can see no good that would accrue to these last from such participation; while, by putting every part of the profession on the same level, it would tend to lower the whole; and that distinction of rank would be abolished, which must ever exist in talents and acquirements, however it may disappear from outward forms. The correct plan of proceeding would be to make the last a real testimony of the former, so that the highest places shall be always held by the highest abilities. That, however, we may make ourselves more clearly understood, we will enter into a short history of the College, from whence we think it will appear that very little alteration is wanting in its constitution to make it a genuine, and therefore a valuable guardian of the respectability of the profession. We shall find that it grew out of the wants of the people, that its powers were correspondent to their habits, that it has been partially modified with the change of manners, and that when it became no longer necessary as a defence against quackery, it changed its object, and endeavoured to give a higher character to its members, by requiring from its higher ranks more intimate acquaintance with the *literæ humaniores*. In these various changes it may not always have yielded graciously, nor always been very just; but the slight outline we have given seems fully justified by the history of the College.

The College of Physicians was founded through the influence of Dr. Thomas Linacre with one of the greatest men and scholars that England can boast of, the famous Cardinal Wolsey. At the time of its foundation there was no superintending medical body, and the country was overrun by quacks of the very grossest kind. This is manifest from the wording of an act passed in the third year of Henry the Eighth, giving the licensing of Physicians and Surgeons for London to 'the Bishop of London, or the Dean of St. Pauls, for the time being, calling to him or them four Doctors of Physic, and for Surgery other expert persons in that faculty;' and for the country to 'the Bishop of the Diocese, or he being out of the Diocese to his Vicar-General.' And this act was passed,

'forasmuch as the science and cunning of physick and surgery (to the perfect knowledge whereof be requisite both great learning and ripe experience) is daily within this realm exercised by a great multitude of ignorant persons, of whom the greater part have no manner of insight in the same, nor in any other kind of learning; some also can read no letters in the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomably take upon them great cures, and things of great difficulty, . . . to the high displeasure of God, great infamy to the faculty, and *the grievous hurt, damage, and destruction of many of the king's liege people.*' In a pamphlet published a few years later, entitled, '*An Historical Expostulation against the beastlye Abusers, both of Chyrurgerie and Physyke in our time; with a goodlye Doctryne and Instruction, necessarye to be marked and followed by all true Chyrurgeons: gathered by John Halle, Chyrurgeon,*' ample illustrations of the truth of the allegations are contained; and the handbills set forth were equal to any that are manufactured by Drs. Goss or Eady, or any other of the advertising gentry of the present day.* The evil being so apparent, the remedy applied was dictated by the general temper of the people, and the nature of the government to which they were subjected, which at that time was decidedly despotic.

In the provisions, therefore, that were made to defend 'the king's liege people,' a despotic principle predominated, and the powers given to the College were of the most summary kind. Every thing, however, leads us to believe, that the real object of the charter was that which appears in the preamble of the act above quoted; and that the corporation itself had no other intention than that of suppressing those ignorant charlatans whose practices were frequently attended with the most serious injuries to their deluded patients. In endeavouring to effect this purpose, which must by all (however differing as to their opinions of the proper means) be considered in the highest degree desirable, they employed to their full extent the only powers with which they had been intrusted, viz. that of fine and imprisonment; they appear

* Here is one set forth by one Thomas Luffkin, by occupation a fuller and burier of cloth at Maidstone.

'If anye mann, womanne, or childe, bee sicke, or would be let bloud, with anye manner of inward or outward grefes, as al manner of agues or fevers, plurises, cholyke, stone, strangulation, impostumes, fistulas, kanker, goutes, pocks, bone ache, and payne of the joynts, which cometh for lacke of bloudletting; let them resort to the sygne of the Saracen's Hedde, in the East-lane, and brynge their waters with them to be sene, and they shall have remedie.

By me, Thomas Luffkin.'

also, it must be confessed, to have been extremely easy in receiving accusations, and frequently to have maintained as true, charges which we can scarcely believe that they themselves credited.

It was to be expected, that a body thus constituted would also have some leaning to their individual interests, more especially as those would generally be the most active members whose interests would be most easily affected by successful interlopers. Such accordingly we find to have occurred; and in the earlier periods of their power their efforts were remarkably prosperous, and they were enabled to ruin many who might have contended with them in practice. To understand this is necessary to refer to a change that had gradually taken place in the apothecaries and surgeons. These, from having been merely servants of the physicians, undertook frequently to prescribe, as well as to compound and operate; and manifestly from the reason alleged by an ignorant charlatan of an earlier period, as an excuse for his own practice, viz. that 'if none should be suffered to use phisicke and chirurgery but the learned, or such as are permitted, a great many poor people would perish for lacke of helpe.' The qualifications of these practitioners were necessarily very imperfect; and so long as they remained so, little evil accrued to the practice of the physicians,—and as they were recognised bodies, few charges were brought against them: but as they were more employed, they became better qualified; and the members of the College at length discovered that the better part of their practice was occupied by others. That they should make some attempt to recover their rights, for such by law they undoubtedly were, can excite no surprise; and at last, in the year 1704, they made a final effort to reinstate themselves, by prosecuting a Mr. Rose, an apothecary, for prescribing. The judges decided unanimously in their favour, for they could do no other; but their verdict was set aside by public opinion, acting through the medium of the House of Lords; common sense and natural justice here taking the place of legal technicalities: and hence have ceased all the compulsory measures of the College,—and from that time their influence over the profession, though still great, has been of a very different kind.

Now it must, we think, be manifest, from this very slight review, that the powers and conduct of the College have followed, throughout, the temper of the times. At first, while they had none but really ignorant men to contend with, all their prosecutions ended successfully, and it cannot be doubted but that they must have operated considerably in repressing quackery. They attempted, however, to go

farther than this, and, by instituting a monopoly of medical practice, to confine all the emoluments of the profession among themselves. Here, however, they were opposed equally by common sense and public opinion, and they failed. So long as the exercise of their powers were deemed useful by the general sense of the nation, and that the prevalence of ignorant quacks was found an absolute nuisance, they were supported in the greater proportion of their prosecutions; but when individuals not members of the College, became more able, as public opinion became more discerning and capable of judging correctly for itself, the despotic superintendence of the College was rejected, and they were confined to the legitimate influence arising from greater acquirements, of which the being a member of the College was supposed a testimonial. That it was correctly deemed so, a century ago, no one will doubt, who is at all acquainted with the then general means of education. A school of medicine could scarcely be said to exist in Great Britain. Edinburgh had not yet risen; London contained no *medical* teachers of eminence; and Oxford and Cambridge alone conferred respectable degrees, although for medical information their members were obliged to apply to the continental schools. It is, however, quite plain that they whose means enabled them to take advantage of the home and foreign education must, *ceteris paribus*, be superior in information; and the public would naturally place in them the highest degree of confidence. It always happens that effects remain long after their causes have ceased to operate; and such has been the case with the College of Physicians. The exclusive rank which its members held, under the circumstances just referred to, have been continued to the present day; although it is evident that if the College is still to retain its rank, some of its regulations must be changed; because it is no longer what it was formerly, a genuine association of the ablest and most learned men in the profession; many of these by its present regulations are entirely excluded. The true policy of the College is to open its doors to all these; otherwise it must eventually sink in reputation and influence.

It has happened from the circumstance of no degrees being conferred in England excepting at Oxford and Cambridge, that the government of the College has fallen into the sole power of the graduates of these Universities. About the middle of the last century, or rather earlier, the medical school of Edinburgh rose high in reputation, and many of its graduates practised in London. As in the former case with the apothecaries, so also in this case; we cannot be surprised that the then fellows of the College used every effort to retain

its influence and its emoluments among themselves. They could not refuse to examine the graduates of Edinburgh for practice; but they could refuse their fellowships, and all those offices which, by bringing them into intercourse with the higher ranks, naturally led, at last, to the most respectable and lucrative practice; and this they, accordingly, have done. Unfortunately for the honour of the College, the least able men have always been the most active; and, aware that some of their rivals were equal, if not superior, to themselves in abilities, they dared not contend with them on equal ground. We wish not to render our present observations personal, and we shall not therefore make mention of any names; but a slight reference to the proceedings of the College will prove that their ablest members have always been the warmest advocates of liberal measures. Secure in their own talents and industry, they sought no unfair advantages, nor suffered a paltry jealousy to influence their conduct.

It must be remembered, that the part the College thus retained is not a mere empty honour, but a sure road, with even common abilities, to eminence and practice. The College is the public organ of the medical body; it is to it that the government have recourse on all medico-legal questions; and to it is left the appointment of proper persons for the examination of any subject in which the legislature may be interested. Thus, in the original imposition of the quarantine laws the College was consulted, and Dr. Mead's book on the plague was the consequence, in accordance with which, the regulations now practised were imposed by an act of parliament. In like manner, also, upon the attempt, in later years, to alter these laws, the College was consulted. In the epidemic at the Penitentiary a deputation was appointed from the same body; and on all occasions it is the medium of communication between the government and the profession. We cannot, however, pass this over without remarking that there are many indications of their influence much diminishing in this respect; for, though they have been consulted, they have not been exclusively relied upon; but reputation has been considered of some value, even though its possessors might not be eligible to sit among the fellows of the College.

The relation, then, in which at present the College stands, with regard to the profession, is this: they have within themselves the most valuable part of medical practice, while its members are not acknowledged by the profession as at all fair representatives of medical science: but, on the other hand, they certainly do stand higher as respects general information; and, from their early intercourse with good society, it may be supposed that their manners will be

generally more acceptable to the upper classes of life. We believe, also, that they have an indirect beneficial effect upon the profession at large, in rendering it more anxious to cultivate, not only medical, but general literature. There is no one characteristic of the present age more remarkable than its inclination to undervalue all moral education. The wonders which have been effected by the mechanical invention of Watt, of Arkwright, &c. seem almost to have overturned the common sense of the times, and every power is stretched to its utmost to render the rising generation not a moral, but a mechanical race. The spirit which thus influences the world generally, has also its effect upon the medical republic; and scarcely any thing is regarded which has not a *direct* tendency to the improvement of medical science; while that indirect influence which is exerted by means of a well-directed religious and moral education is entirely overlooked. This is certainly exactly the reverse of what ought to take place, inasmuch as the happiness of men depends far more upon the proper control of their internal feelings, than their external circumstances; far more upon a mind 'void of offence,' than upon the highest intellectual acquirements. Neither can there be a greater mistake than the supposition that knowledge is always in itself beneficial. It is indeed a tremendous engine of good or evil. With him whose mind is directed aright, it is an instrument of advantage to himself and to the world; but with him whose moral feelings are not decidedly virtuous, it is but an additional and terrible weapon of ill. Nor in any department of life is this more manifest than in the practice of medicine. It is a most lamentable thing when the arts of quackery are united, as sometimes they are, with the possession of real science. The profession itself is then degraded, and the public are preyed upon with impunity.

Now it is precisely as a corrective to this state of things that the education imposed by the College upon its fellows has a tendency to operate. However much it may be the fashion to decry the routine of the English Universities, and their devotion to classical literature, no one of a really candid mind can do otherwise than refer the high and noble character of our gentry to the sentiments with which their minds are imbued in those venerable places. Who indeed can read the classical language of Cicero without finding his better feelings awakened, and all his prejudices engaged on the side of virtue? Or where can we find commendation so beautifully expressed, of all that is great and admirable in the human heart? The very histories of Greece and Rome have in them something fascinating; and even when we are misled

in our judgments, it is always on the side of the higher and more generous feelings. That deep sense of honour by which the real English gentleman is distinguished, is perhaps indebted for its origin, certainly for its increase and majestic maturity, to the lessons inculcated in his classical studies, and which have spread their influence over those who little suspect the source from whence their opinions are derived.

We cannot, then, regarding as we do an acquaintance with classical literature as an important, we might almost say, a necessary part of education, wish to see any institution abolished which encourages its cultivation,—we cannot therefore consent that the charter of the Royal College of Physicians should be annulled, nor the fellows deprived of the government of the corporation. Still, however, it is manifest that some change in its regulations is necessary, because it is every day becoming less and less a genuine representative of the profession. The remedy we would propose is not violent; it has no tendency to diminish the respectability of the fellows, nor to deprive them of their privileges,—but it would make the rank of licentiate entirely voluntary.

After what we have said, it cannot be supposed that we would advocate any measures which would render lower attainments necessary than are now required: to this we are decidedly opposed.

A respectable share of classical information ought always, we conceive, to be demanded from the fellows; and they who have already graduated at Oxford or Cambridge, bring with them in their degree a testimonial that they do possess it. The College cannot with common decency question the truth of this test, although, without doubt, many may obtain degrees at either University with a wonderful lack of knowledge. Such, however, must always be the case. With those, on the other hand, who have not obtained a classical degree, the matter is very different; and from them the College may reasonably demand a proof that they have an acquaintance with classical literature: for this purpose, an examination similar, or perhaps more severe than the examinations for common degrees at the Universities, might be appointed; and the examiners should always be men of high character at Oxford or Cambridge. This examination need not be compulsory, excepting upon those who wish to attain the fellowships; but all should have a right of demanding the examination. The consequence of such a regulation would be, that all those licentiates, at least of the succeeding generation, who would be likely to distinguish themselves, would be enrolled among the fellows of the College; for it cannot be supposed that men of high abilities would hesitate to devote the little time

to classical studies that would be necessary for the purpose. At the same time, the examiners not being members of the profession, and consequently not of the College, would not be suspected of any unfair bias; and they would pass or reject men according to their actual merits.*

It does appear to us, that a regulation of this kind would make the College what at the commencement of this article we stated it might be—the genuine, and therefore the valuable guardian of the respectability of the profession. Of this, however, we are certain, that unless this body is prepared to extend its fellowships, it must ere long lose very greatly, if not entirely, its influence. Public opinion is every day becoming more powerful; and with regard to the merits of individuals daily more correct. It has already discovered that very able men, nay, the very ablest men, are not always members of the College; and it has nevertheless singled them out, and conferred upon them reputation and practice. The number of these is also increasing; and unless such men become eligible to, unless indeed they hold, the highest offices of their profession, the value of these must ultimately become valueless, and a Fellow of the College be no more than a King of Brentford, or a Mayor of Garrat. Secure in their present possessions, the College may perhaps laugh at every foreboding, as the artifice of an enemy, and treat it with contempt and ridicule. Upon themselves, however, will unquestionably at last fall the loss and the shame,—for deeply rooted indeed in acknowledged utility must that institution be, that can escape the prevailing rage for innovation and destruction. For ourselves, we have no interest in their decision; we are not members of the College, nor shall we become so; neither are we graduates of the English Universities: but we have a respect for that which we believe to be useful,—and we wish nothing to be destroyed that has the slightest tendency to exalt medicine as a science, or its professors as men.

* Could the College make any agreement with the Universities, the examinations might take place in regular order among the common examinations for degrees.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ORIGINAL PAPERS.

- I. *On the Distinction between Rheumatism and Inflammation.* By WILLIAM SHEARMAN, M.D., Senior Physician to the Royal West London Infirmary, &c.

WHAT, in the medical language of the present day, is called 'inflammatory action,' is frequently a process instituted by nature for the cure of some previous disease, or deviation from a state of health in some particular part. But this process sometimes exceeds in degree what is merely sufficient for the intended purpose; and we are apt to consider this attempt of nature, whether excessive or not, as a state of disease, overlooking the actual original local disease, or to confound them together: this is particularly the case in rheumatism, which is usually denominated an inflammatory disease; but an accurate investigation into the nature and progress of rheumatism will convince us that all the inflammatory action accompanying this affection arises during its course, *subsequently* to the primary attack, and is produced in consequence of the local affection, and as the natural cure thereof.

The division of rheumatism into acute and chronic is unnatural and absurd,—the essence of the disease is the same under all its varieties; but we are in this instance, as in many others, misled by the vague application of general terms. We ordinarily employ the word chronic to signify the protracted state of disease; and in the case of rheumatism more particularly, to denote the duration of the disease, after the cessation of whatever disturbance of the general system accompanied the early stages of the complaint. But we frequently have rheumatism occurring, and that with great severity, without any the least disturbance being produced in the general system; and this state is also called chronic. Nothing but custom could induce us to employ the same term to express such different and opposite conditions. It would be better at once to do away with these distinctive appellations, and to use the term rheumatism simply, to denote the disease, whether existing in the one or other form; to consider what is now called chronic rheumatism as the essential disease, the inflammatory affection as an adventitious circumstance; for we shall find that pure rheumatism always *first* arises in this form, and when the local affection is not cured by the general inflammatory disturbance, that it again maintains the same form after the subsidence of such general disturbance, in which case alone could the term chronic be applied with any the least regard to its etymological derivation.

To shew the state of ambiguity and confusion into which we are plunged by employing such vague distinctive appellations, it is only necessary to advert to the description of this disease given by an eminent systematic and practical writer, whose opinions were long held in universal estimation, and whose authority is not yet extinct.* Upon one or two of this author's observations on the disease in question, it may be worth while to make a remark, illustrative of the unnatural separation of acute from chronic rheumatism, and of the impropriety of considering them as distinct species.

He appears to think chronic to be commonly the sequel of acute rheumatism; it is chronic, he says, when the pyrexia has ceased, which pyrexia was the effect of the phlogistic diathesis existing in the individual. This phlogistic diathesis is to be removed by blood-letting, and other depletory methods; when the disease is reduced by these means to its chronic state, stimulants of the most powerful kind are recommended by him for the cure. But if this chronic state were merely the *residue* of the same disease, before accompanied with phlogistic diathesis, there is inconsistency in employing remedies to *reproduce* that phlogistic diathesis. Might not the same end be answered by carrying the previous reduction of the original phlogistic diathesis to a less extent?

Again, he says that general and topical bleeding are only useful in chronic rheumatism in proportion as it partakes of the *nature* of acute rheumatism. But if the chronic be, as he before said, in any case merely the remains of the acute, how can its nature be different? Or if the acute and chronic ever really differ in nature, how do too large bleedings convert the former into the latter? These instances suffice to shew the incorrect notions entertained on the nature of rheumatism. The fact is, as has been said, chronic rheumatism is the *actual* disease—the acute a mere variety occurring in strong and robust habits, and being thereby so modified as to produce general inflammatory affection of the system.

Rheumatism, in its acute form, is generally ranked among the *phlegmasiæ*, and the local affection of the joints is usually called inflammation,† which latter is commonly considered to be the effect of the previous inflammatory action of the general system, manifesting itself more particularly in the affected parts; but there is reason to believe, that in most, if not in all cases of pure rheumatism, the local precedes the general affection;‡ and that such local

* Cullen.

† The Editor of the *MEDICAL REPOSITORY*, vol. xx. p. 27, has expressed some doubts of the identity of inflammation and rheumatism; and his observations deserve attention.

‡ Rheumatism may arise during the progress of a fever, viz. in the first or second paroxysm, as sometimes does pleurisy or enteritis; and in general we are not sufficiently careful to distinguish this combined state of disease from the increased action of the system *produced* by the local disease in other cases of acute rheumatism. In both instances we usually employ the term rheumatic fever. They differ, however, considerably, both in their nature and the treatment required for their cure.

affection is quite distinct, and materially different from proper inflammation, unless we are determined to reckon every appearance of redness and pain as inflammation, without any regard to the essential characters of that disease, in which case the species of inflammation may be multiplied to an indefinite extent.

The local attack of rheumatism usually commences with coldness, numbness, paleness, and evident debility of the part; there is at first neither swelling, heat, redness, nor increase of circulation. When these latter symptoms subsequently take place, the disease is said to be acute inflammatory rheumatism; but the local affection, although manifesting heat, redness, and pain, in common with local inflammation, differs from it in several circumstances. In phlegmonous inflammation, the pain is acute and throbbing; in erysipelatous inflammation, there is a considerable sense of soreness accompanying the pain; in rheumatism, the pain is materially different from either of these—it appears to be more distensive and more lancinating. Inflammation, when it has attacked a part, remains confined to that part, or is extended only by progressive continuity; rheumatism attacks and recedes from various parts successively; and we not uncommonly have one joint swelled, hot, and red,—whilst another, just previously affected in the same manner, shall become cold, pale, and contracted, exhibiting no signs of inflammation,—yet the same joint shall again become hot, red, and swelled; and this alternation we find to take place with several distant parts, whilst no such occurrence is observed in pure local inflammation. In every inflammation, the veins running from the inflamed part are larger, and when opened, the blood flows out of them with greater velocity than natural; whereas in most cases of rheumatism, the veins are smaller, and blood does not flow out of them with such force as in the other instance.

Rheumatism does not possess the character of convertibility, which distinguishes the different species of inflammation, one of which is frequently, under certain circumstances, converted into the other. Phlegmonous inflammation, possessing all the distinctive characters of that species, pouring out pure and ‘laudable’ pus, shall, upon the patient being exposed to the contaminated air of a foul ward, or being otherwise suddenly debilitated, immediately be converted into erysipelatous inflammation, pouring out, instead of pure pus, a sanious ichorous fluid, and extending itself superficially in the usual manner of erysipelas. On the other hand, in many cases of local inflammation, possessing all the distinctive erysipelatous characters, we employ cinchona, resinous substances, and tonics, with the effect of converting the erysipelatous into phlegmonous inflammation, and changing the sanious ichorous discharge of erysipelas into the pure and genuine pus of phlegmonous inflammation. But rheumatism never, under any circumstances, is converted into phlegmonous nor into erysipelatous inflammation; neither is a phlegmon or an erysipelas converted into rheumatism, although frequently into each other. Rheumatism, therefore, possesses not the common characters of inflammation.

As well might it be said, that rheumatism is a spasmodic disease as an inflammatory one; for it possesses some properties analogous to those of spasm, as it does to those of inflammation, although it is essentially different from both.

In spasm, sudden and acute pain attacks various parts, in uncertain succession, inconstant in its return, and of very short duration; the same takes place in rheumatism; in both cases no assignable cause can be traced for these sudden and uncertain attacks: there appears to be a particular disposition in the parts to irregular motion; an increase of the mobility or irritability of the system, in which state action is produced from very slight causes. This irregularity manifests itself particularly in muscular fibres, along the course of which, the pain, both of spasm and of rheumatism, seems to be propagated. Nothing of this kind appears to take place in pure inflammation; the disease is frequently extended by continuity, but does not manifest this variable and inconstant shifting of place; this short duration, and quick spontaneous cessation; this uncertain return to its original spot,—which are observed in spasmodic and rheumatic affections.

In severe pure local inflammations, whether internal or external, we resort to copious blood-letting as a means of cure, and have no fear either of increasing or protracting the disease by this measure. But in rheumatism we are cautioned not to carry blood-letting to too great an extent, lest we convert acute into chronic, and protract the disease, or produce metastasis to some important organ, as the heart,—an event we never dread to happen from the most copious depletion in pleuritis or other inflammations.* It may be observed also, that although in rheumatism metastasis frequently takes place from the extremities to an internal part, we have no instance of this disease originally attacking an internal organ—a circumstance not at all uncommon with inflammation, as instanced in the case of pleuritis, enteritis, &c.

In inflammation, again, when we have subdued the general affection of the system, leaving only some remains of pain and uneasiness in the part affected, we do not resort to stimulants to complete our cure; we should rather fear a reproduction, or increase of the disease by so doing. But in rheumatism, when the general affection of the system is subdued, we do not hesitate to give stimulants internally to carry off the remaining local disease—a practice which, in proper inflammation, would be extremely prejudicial. This circumstance alone points out no inconsiderable difference between the essential characters of rheumatism and of inflammation.

If there be actually and essentially a specific difference between rheumatism and proper inflammation, it will be evident that precisely the same medical treatment cannot be adapted to both cases; and it may be worth inquiry, whether mischief is not frequently done

* An excellent case illustrative of this point is contained in Dr. Chapman's Journal, No. 12, which is noticed by Dr. Johnson in the Med. Chirurg. Review, vol. iv. p. 933.

by inconsiderately confounding the two diseases. Rheumatism is now more invariably treated by antiphlogistic means, and these carried to a greater extent than was the case a few years ago, when men of the first eminence in the profession exhibited cinchona largely in this complaint, trusting entirely to that medicine and sudorifics for the cure,—employing bleeding, if at all, only to the extent of moderating the general excitement of the system. Yet it appears, from the most authentic testimony, that rheumatism was as frequently and as effectually cured under the former plan as under the present one.* It may also be worthy of inquiry, whether hypertrophia of the heart, and that painful and fatal affection of that organ which now occasionally succeeds rheumatism, denominated metastatic carditis, were as frequent formerly, and only attracted the attention of practitioners within these few years past; or, whether the occurrence is at all connected with the more rigid antiphlogistic treatment of rheumatism, especially when this treatment is adopted in weak and irritable habits.

It is the fashion at present to refer all diseases to one morbid condition only, 'inflammatory action,' and consequently to resort solely to the methods adapted to subdue this inflammatory state. Were the hypothesis just, the simplicity of treatment to which it gives rise would unquestionably be a great improvement in practice; but it may be doubted whether the blind attachment to this fashionable doctrine has not, in many cases, diverted our attention from other and more just views of pathology, and led us to neglect many efficient means of cure, which have heretofore been attended with success, at least equal, perhaps superior, to what is experienced in the present day.

August 12, 1826.

II. On Strangulated Hernia.

TO JOHN ABERNETHY, ESQ.

DEAR SIR,—I take the liberty of again requesting your attention to the subject I submitted to you in the *Edinburgh Medical and Surgical Journal*; its seeming intricacies invite the examination of a master of his art. In compliance with the wish of Dr. Bishop, in the *MEDICAL REPOSITORY* of November last, I offer some further observations. I consider strangulation to consist in inflammation of the gut, closing it up in the aperture, and confining the highly pungent contents, which become a cause of increased distress; the usual taxis contuses the parts against the stiff tendons, so as to favour derangement of structure, hence leading to permanent ob-

* Since writing the above, I have seen an account of a case of rheumatism in a man, thirty-six years of age, in St. Bartholomew's hospital, treated by Dr. Latham without bleeding, wherein it appears the patient was cured in a short time.

iteration of the calibre by agglutination or ulceration, should the inflammation continue long. Dr. Bishop treated a strangulated hernia in the usual way for three days; on the fourth he operated, and reduced the intestine: after twenty hours' violent pain, the termination was fatal. Examination of the body discovered the portion strangulated completely impervious one inch and a half in length. Surprised at this, as was Dr. Arnold, who assisted him, he related the case to Sir A. Cooper, to whom it was equally novel,—strong evidence of its not having been noticed in British surgery, and ample excuse for me, were I to grant that I required any, for not having adduced *post mortem* facts to confirm my statements, as remarked by Dr. B. and the able editor of the *Medico-Chirurgical Review*. I never attempt to reduce the hernia in the usual way, therefore such an instance could not have happened under my care; my practice is designed to prevent, and to ascertain imperviousness, aware that the replacement in this state premises fatality. My statement was an induction from facts, and from the phenomena of the disease, as I had observed them, and the records of practice exhibited them.

Dr. Heberden, in his *Commentaries*, mentions the gut being found perfectly obliterated in cases of ileus. There is a case in the *Edinburgh Medical Essays*, of a man, seventy years of age, who had an hernia many years; was attacked by vomiting of fetid excrements; no stools for many days; the hernia not then outside. On examination *post mortem*, the passage at the valve of the colon was shut up, and two inches breadth of the gut degenerated into a hard solid substance. The same work has a case in which the sides of the os uteri were grown together firmly, and which was discovered whilst in labour of her second child. The *Transactions for Medical and Surgical Knowledge* has a case from Sir Everard Home, in which two inches and a half of strangulated portion of ileum had an inflammatory exudation of coagulated lymph, adhering to different parts of its internal surface, which was extremely vascular: a disposition to adhesion of mucous surfaces is observed in the nose, œsophagus, lungs, and intestines, and urethra of some: in these cases there is no stricture, tendonous pressure, &c. Is it not, then, reasonable to apprehend, in cases of local irritation from the resistance of rigid parts, that the adhesive process would take place occasionally, and certainly where a prediagnosis existed, in the individual who was seized with strangulation, to such process? One would expect that the experiments and observations of John Hunter, together with the facts recited, were conclusive on this head, and warranted my anticipation of such a result as Dr. Bishop discovered, although I have not confirmed it by *post mortem* facts of precisely the same description; of which one case only in France and one in England are publicly known; and this novel to Sir Astley Cooper himself, who has been more elaborate on the subject than any other practitioner. Here I beg attention to his lecture, as reported February 1826: he says, 'That cold applications are useful in removing strangulation, and gives instances of their success; but

that it is an absurdity to attribute this to diminishing the volume of air, and that if cold had such a power it would do no good—nothing could be gained by it; that the principle is erroneous; diminishing can do no good whilst the pressure is the same; it is of no use to empty the gut of its contents, &c.'

The late Alexander Monro, in the *Edinburgh Medical Essays*, contends that the volume of air is a chief impediment to the removal of strangulation, and forbade warm applications, as calculated to increase it; he quotes Dr. Huxham, who witnessed an enormous enlargement, occasioned by heat. That warm air is condensed by cold, is a fact beyond dispute; and the propriety of diminishing whatever is too large, equally so: it resolves itself into this simple question, is the gut morbidly enlarged or not? The late John Bell arranged, as parallel cases, laborious child-birth, distended urinary bladder, and strangulated hernia; the analogy, he says, is striking and illustrative. I would ask, how is fatality to be prevented in each? Surely, in the first, when the head is too large, by emptying it of the contents; in the next the same; and in the last also: in the two latter, the acrimony and pungency are increased every moment by remora in the viscus.

About thirteen months since, I removed strangulation in the way I advocate; instant relief followed; the contents, but not the gut, were returned. Mr. Graves, an eminent apothecary, being present, I requested of him to feel the flaccid gut, which, after a few minutes, returned. In another case, with very violent symptoms, Dr. McKeever witnessed the like treatment and result. On the 3d of November, an elderly woman suffered strangulation at the navel about fifty hours, which resisted the usual treatment—vomiting of faecal matter was constant—a gentle effort by the taxis caused great pain,—and operation seemed the only remedy. Mr. McDowel saw her the first time early in the morning; I met him and Mr. Adams at mid-day, both surgeons of the best acquirements; I removed the strangulation in about fifteen minutes; on the contents receding, the distress abated; a foetid stool passed after a few hours; the attendant pain was far less than she felt on the unsuccessful effort by the taxis.

These facts, authorities, and arguments, I hope will convince Sir Astley that the principle and practice he condemns are better founded than he imagined; and that if he suffers such a calamity (which I trust may never happen), he will beware of the course he proposes for himself, namely, first the taxis for fifteen minutes,—then bleeding, tobacco, enema,—and if they fail, operation speedily; and that he will reverse the order, because the taxis must add to the inflammation if it fails, as it presses the irritated parts against tense tendons, and enlarges above, where diminution is indispensable. Suppose he was bled first to lessen inflammation, the danger from handling would not then be so much; were all possible means of allaying irritation used before the hands, it would be judicious. My advice is, to apply cold for an hour before touching the part; it controls inflammatory action,—abates sensibility evidently,—and, I

think, chills the intestine all through,—also condenses the warm air, so as to occupy less space, and thus is moved through the gut separating the villous coat; the ascertained effects of cold, and the hissing noise perceived on removal of the tumefactions, warrant this rationale; it goes up *per saltem*, not *paulatim*, as the fingers are erroneously employed to accomplish. It is evident, that the erudite Monro and Huxham held the opinion I maintain as to air, cold, &c.; and that John Bell, whose works evince the *visus eruditus* in a degree equalled by very few, having strongly marked the analogy between this disease and others, which were remediable only by the practice I adopt, supports my principle; and all are opposed to Sir A. Cooper, whose labours I respect, and whose character I highly esteem. To the zeal and sagacity of Dr. Bishop, the cause of humanity and science are deeply indebted, for discovering and ardently investigating an important fact, which will light the way to improved treatment, hitherto unsuccessfully advocated. He practised after the most approved manner; and, like a scientific man, found out and *marked the rock* to be avoided.

For further details, I refer to my pamphlet, requesting indulgence as to the manner, but none for the matter; the former betrays carelessness and haste—the latter is the result of much experience, observation, and reflection. I have defended it in the *Edinburgh Medical and Surgical Journal*, 7th vol., 1811, which I hope will be perused; and I am desirous that the arguments be patiently examined, satisfied that they are based on sound principles, and must ultimately prevail.

I am, with high respect and regard, &c. &c. &c.

EDWARD GEOGHEGAN.

Dublin, Feb. 1st, 1826.

P.S.—Let an intestine be doubled, and passed through a hole in stiff pasteboard; inflate it; pass a cord around it in the opening; then try pressing up from the bottom with one hand, and work with the points of the fingers of the other, at the upper part, to get a bit inside the opening; and you will see the contents accumulate above the gut, overlapping the ring, the fingers effecting nothing but bruises; and you will instantly perceive that the inflated state must be removed; that the gut is active, pressing against the pasteboard, because the former is too large, and made still larger by the hand.

III. *Extensive Injury of the Abdomen by the Goring of a Bull.*
By WILLIAM DIX, Surgeon, Long Buckby, Northamptonshire.

ABOUT six o'clock, P.M. on the 18th of August last, a young man, nineteen years of age, was attacked by a bull, and received a wound from the horn, of nearly three inches, on the left side of the abdomen, midway between the spine of the ileum and inferior margin of the ribs, inclining anteriorly. About three feet of intestines protruded, with a portion of mesentery and omentum. I found him in the field,

twenty minutes after the accident, very pale, pulse rapid, hardly perceptible, and vomiting blood with the contents of the stomach. I ordered him home, and immediately returned the mesentery and intestines; but as the omentum was considerably lacerated, I cut the injured parts off; a little hæmorrhage succeeded, which was soon suppressed. As there was a strong disposition in the parts returned to protrude, I made one suture, and closed the remaining parts of the wound with adhesive plaster, over which was applied a compress and bandage; gave him some warm gruel and an anodyne, and desired him to be kept in a horizontal position, and quiet.

19th, in the morning.—Had a tolerable night; countenance very florid; skin hot; pulse 125, and hard; tongue furred; abdomen very tender to the touch; breath short, with a difficulty of swallowing; no sickness. Venesection to syncope; a common enema to be injected, and a saline aperient taken. Visited him in the evening; the injection had procured a slight evacuation; pulse and other symptoms the same as the morning. Bled from the arm again until syncope was produced.

20th, in the morning.—Has had a pretty good night; pulse 100; no sickness; abdomen tender on pressure; skin hot. Twenty leeches to the belly; *capiat ol. ricini ʒss. omni horâ, donec alvus responderit*; injections to be continued.

21st.—Has had six copious evacuations, and is much relieved; pulse 95.

22d.—Three evacuations from *ol. ricini*; pulse 90; a good deal of pain in the night. Twenty leeches to the left hypochondrium.

23d.—Pulse 80; bowels open; appetite good. Diet, gruel.

24th.—Pulse 65; looked at the wound, which was fast healing, and cut out the suture. Diet, milk and broth; let him take castor oil when necessary, and be kept in bed. From this time he went on progressively recovering, and is now perfectly well.

In less than a fortnight after the accident, he walked about his master's fields, which was contrary to my advice; and he was near paying dearly for his temerity, as he caught cold, and was attacked with symptoms of peritoneal inflammation, which were speedily subdued by copious bleeding from the arm, and twenty leeches to the abdomen.

October 8, 1825.

SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. *Notice of Eight Calculi arrested in their passage through the Urethra, and extracted by means 'd'une pince à gaine'—forceps with a sheath.* By M. LEGALAS.

‘THE subject of this observation was Captain B., a gentleman of

sanguine temperament, strong constitution, and good moral habits. He had retired to his native place, where he lived calm, and free from every inconvenience; when two years since, at the moment of getting into the Diligence, he was seized with a complete retention of urine. He proceeded, however, from Paris to Chartres, which took thirteen hours. At this last place, and after the escape from the urethra of a body which night did not permit him to distinguish, he was enabled to empty his bladder. For a year and a half from this time, he continued to pass his urine in a full stream; but there were always momentary retentions, which determined him to employ habitually a mild regimen, '*régime adoucissant*.'

'About last December, M. B. passed a lenticular-formed calculus, of the diameter of six lines, after violent efforts, and a retention of urine, that endured from six o'clock in the morning till eight at night. The urine then flowed copiously, but mingled with a considerable quantity of blood.

'A month after (January), he was again seized with retention of urine, sudden and complete; but this time, in less than five minutes, and with slight effort, a calculus came away, of nearly the same size with the former. This was so fragile, that while trying its consistency it crumbled between his fingers.

'From this time he remained tolérably well for four months; occasionally, however, he noticed slight difficulty in passing his urine,—and sometimes it was mixed with blood, particularly after bodily fatigue.

'In May, after beginning to urinate as usual, he perceived a sudden obstruction, occasioned, to use his own words, "*par l'effet de quelque chose qui se détachait du corps*," by the effect of something that was detached from his body; and he remained without passing any urine for a whole day. But at night, having recognised the presence of a foreign body in the urethra, and having laid hold of it with his fingers, he discovered that he could in this way pass his urine; but he could not entirely remove the opposing body. He continued, however, to pass his urine in this manner, till several calculi had successively arrived in the urethra.

'At length, on the 26th of October, the day on which I saw him for the first time, M. B. counted six calculi; he could no longer pass his urine, till after many attempts to hold the calculi; often lost blood from the urethra; and the slightest error in diet, or fatiguing exercise, occasioned him fresh inconvenience.

'It was impossible to have the least doubt respecting the cause of these symptoms; but we wished to ascertain if the calculi were retained by a band across the urethra, or by a stricture. Examination quickly cleared this point; a silver sound passed without difficulty to the calculi; and we no longer hesitated in our endeavours to extract them.

'A strait forceps enclosed in a sheath brought one away very easily; this was the smallest. The second could not be laid hold of with the same forceps; but was easily seized by another curved pair and grooved at upon the side. It was obstructed, however,

at the gland, and broke under the instrument, and then came away in fragments. Four other lenticular-formed were drawn out easily, and extracted by the aid of these forceps. Lastly, the seventh, unquestionably the greatest, was readily seized, but passed the gland with difficulty, and not till it had been broken.

‘ The operation was concluded without any accident, and without any farther inconvenience than a slight gleet. Another calculus was extracted on the 26th of November,—from which time he had remained well till the publication of the paper in July.

‘ The calculi were analysed by Vauquelin, and were found of uric acid, with a small proportion of potash, with traces of phosphate of magnesia and soda.’—(*Nouvelle Bibliothèque Médicale.*)

II. *Observations upon a Case of Chronic Dyspnœa.* By M. ANDRAL, fils.

‘ A YOUNG man, twenty-four years of age, having had indolent swellings in the lymphatic ganglia of the neck, presented many symptoms of disease of the heart when he entered the hospital La Charité, in the beginning of March 1826. Face bloated; livid lips, and *alæ nasi* of a violet hue; œdema of the eyelids; ascites; slight effusion in the lower extremities; respiration short, hurried, entirely executed by the ribs. Horizontal position induced an instant sense of suffocation; and the patient passed his days and nights in a half-sitting posture, upon his bed, the head and trunk being supported by pillows. This difficulty of breathing had come on very gradually, but for more than a year had been exceedingly distressing to the patient, and was always augmented in damp and rainy weather. The chest sounded clearly in every part upon percussion. Auscultation gave no indication of disease, either in the heart or great vessels. A mucous râle was heard in different parts of the chest; in one part a dry, hissing râle—in another the respiratory sound was clear, but intense. For several months the patient had suffered from catarrh; he had never, however, spat blood,—and when we saw him, his expectoration was scanty, and mucus only. The appetite was tolerably good; and he had habitual diarrhœa, but without any pain in the abdomen. The pulse, not at all accelerated, exhibited nothing unusual either as respected its strength or rhythm.

‘ Nothing proved that disease of the heart existed in this individual; and yet this malady was indicated by many symptoms, as dropsy, orthopnœa, and the appearance of the countenance. This dropsy presented, however, one circumstance which is not commonly met with in diseases of the heart,—effusion had taken place in the lower extremities, consecutively to the abdominal effusion, and was still slight. We know, on the other hand, that in disease of the heart, dropsy commences, in the majority of cases, with œdema round the ancles. Auscultation discovered no cause of the dyspnœa either in the lungs or in the heart.

‘ The treatment consisted in general and local bleeding; in the

application of blisters upon the chest and lower extremities; diuretic tisane, and frictions, with tincture of digitalis, and squills.

‘ Through the next six months the patient experienced no particular change: the orthopnœa was continual; respiration became exceedingly hurried upon the slightest effort to go from his bed. Examination with the stethoscope gave no farther information. We never observed any fever properly so called. Nothing announced the approaching death of the individual,—when, without any manifest change having supervened, he was suddenly seized on the 1st of May with an extreme dyspnœa; very soon a tracheal râle ensued; respiration became apoplectic; and after a few hours he died.

‘ *Examination of the body.*—Nothing remarkable was found either in the brain or spinal medulla.

‘ In the thorax, the heart had all its usual proportions, and was entirely free from disease,—as also was the pericardium: it contained a small quantity of dark-coloured blood, partly coagulated. All the vessels of the heart were healthy. A small quantity of miliary tubercles were spread through the lungs, which were rather in a congested state, but yet sound, and every where full of air. Some old adhesions united the pleura pulmonalis and costalis on both sides.

‘ The anterior mediastinum was occupied by a large mass of tuberculous lymphatic ganglia. Through the middle of this mass the two diaphragmatic nerves passed; it was impossible to trace them, from the numerous tubercles that surrounded and pressed on them from every side. They reappeared at a short distance from the diaphragm; and, from the point where they were disengaged from the tubercular mass, to their distribution in the diaphragm, these nerves were remarkable for their gray colour,—similar to what the optic nerve affords distributed to an eye that had long been lost.

‘ In the abdomen the stomach was sound. Numerous tubercles were spread upon the mucous membrane of the small intestines; some small and superficial ulcerations, to the extent of some inches above the ileo-cæcal valve; a tubercle, of the size of a hazle nut, in the cortical part of one of the kidneys; cellular adhesions between the diaphragm and liver, the substance of which was healthy; and, lastly, in front of the vertebral column an enormous mass of tubercles, which strongly compressed the vena cava on the one side, and on the other the vena portæ, the principal abdominal branches of which, as well as the trunk, it completely surrounded.

‘ On each side of the neck, there existed, from the edge of the jaw to the clavicle, a chain of tubercles like those of the thorax and abdomen. Many were interposed between the vessels and nerves of the neck; and the carotid artery and internal jugular vein were separated by these tubercles. As for the pneumo-gastric nerve, it was entirely lost in the middle of the tubercular mass, some inches below the origin of the superior laryngeal nerve. It reappeared a little below the level of the clavicle; and was remarkable on both sides *from being flattened*. It gave origin, as usual, to the recurrent nerves. In the remainder of its course, and especially in those

branches which form a great portion of the pulmonary plexus, there was nothing remarkable.

‘ The cervical portion of the great sympathetic had experienced no manifest alteration either in its structure or position.

‘ Each axilla was occupied by a tumour of the size of a large orange, consisting of an assemblage of tubercular lymphatic ganglia.

‘ The thoracic duct, permeable as usual, contained a small quantity of reddish serum.

‘ This observation appeared to me particularly interesting, from the state in which most of the respiratory nerves were found, and particularly the nerves of the eighth pair. M. Béclard has already related the case of an individual in whom he could find no other lesion to explain a considerable dyspnœa that had existed during life, than a large tumour, developed in the substance of one of the diaphragmatic nerves. (Thesis of M. Descot, upon Affections of the Nerves.) In the present case, not only the two diaphragmatic nerves had undergone a great alteration, which was sufficiently manifest by the gray colour, the true atrophy of their inferior extremity, but the two pneumo-gastric nerves were also seriously involved, as was proved by the impossibility of tracing them through the tumour, and their flattened extremities. Now, if the experiments of physiologists have proved that after the division of the eighth pair of nerves sanguification is not perfectly performed, the lungs become congested, and death supervenes in a few days,—is not the fact here reported an additional illustration?—“ rapprocher de cet ordre de faits.”

‘ There was equally a gradual diminution; and, lastly, a cessation of the influence exercised by the eighth pair upon the transformation of the venous blood into arterial; hence the regular increase of the dyspnœa, &c. If we will not admit this cause of the difficulty of breathing, we have no other organic lesion which will enable us to account for it; for I cannot think that the few miliary tubercles that were found in the lungs will at all explain the dyspnœa, which was as distressing as that which is met with in the severest diseases of the heart. In whichever way we consider it, whether as connected with the morbid appearances that were discovered, or as independent of every manifest cause, I consider the case as one of sufficient interest to lay before the Society.—(*Bulletin de l'Athénée.*)

We regard this as a case of extreme interest; and there can, we think, be no doubt of the connexion of the symptoms during life with the morbid appearances discovered after death. The disease was evidently incurable; but by proving that dyspnœa may arise from disease of these nerves, which before we could infer only from experiment (for Béclard's case is almost unknown), it affords farther proof, if proof were wanting, of the correctness of Dr. Philips' views in some species of asthma. It would have added very considerably to the interest of this case had galvanism been tried.—EDITORS.

II. *Upon the Treatment of Syphilis without Mercury, with reference to the Experiments lately made in Great Britain.* By Dr. FERDINAND WILHELM BECKER, of Berlin. Translated from a Paper in the Archiv. fur Medizinische Erfahrung, &c. Von Dr. HORN, &c., for Jan. and Feb. 1826.

‘*Si habemus regias rationes curandi, quæ ut plurimum et certius sanant, sine corporis incommodo, et si non sanant, leniunt sine noxâ, non proritant affectum, cur utrum hydrargyro, ex quo non ita certa, usita tuta succedit sanitas? Si non sanantur, proritatur et valentior fit lues—lube factum viscera et partes solidæ corporis, et aliquando hujuscemodi medicamentum remanet in humano corpore. Multi marasmo corripuntur, multis succedit dentium casus, palati corruptio; his ossa capitis exesa manent, illis os et facies intortu.*—GABRIEL FALLOPIUS de Morbo Gallico. Pata. 1564, cap. lxxvi.

[We pass over some preliminary observations upon the little attention, comparatively speaking, that Dr. Becker asserts the subject had attracted in Germany, and begin with that part of the paper where he traces the introduction of mercury as a specific remedy against syphilis.—EDITORS.]

‘MERCURY was much employed, particularly in the treatment of diseases of the skin, at the time that the venereal disease first appeared; it was naturally to be expected, therefore, that it should be employed in this new and raging malady, which at that time appeared also as a disease of the skin. This accordingly occurred; but that the success of the then mode of application (viz. in the form of ointment) was not very brilliant, the numerous essays that were published against its use (viz. Schellig, 1497; Montesaurus, 1497; Sebastian Aquilanus, 1498; Bartholomæus Steber, 1498; Caspar Torella, 1500;) sufficiently prove; as well as the general impression, notwithstanding this remedy was well known, that syphilis was yet an incurable disease.

‘Notwithstanding this, however, mercury was still employed among many other dietetic and pharmaceutical remedies, the multifarious composition of which leaves us doubtful whether more to wonder at the patience of the physicians, or to smile at the strangeness of their medical doctrines; when about the year 1518, a very important remedy was brought to Europe, viz. guaiacum, which was followed by the introduction of sarsaparilla, cinchona, and sassafras.

‘A new era in the treatment of syphilis commenced: they flattered themselves with having discovered a royal road (regiam methodum) of cure, in which guaiacum and the dietetic plan occupied the principal place, and from which mercury was altogether excluded; and we find that the majority of writers, till the middle, or almost to the end of the sixteenth century, either exclusively employed this royal method in its various modifications, (some of which, as the antiphlogistic practice, the exhibition of aperients, &c., remarkably coincide with the treatment latterly proposed,) or at least laid aside mercury, which they partly thought useless, partly

dangerous, and only to be used in cases of the extremest necessity. I shall quote a few only among the many who have held these opinions.

Thus Alfonsius (1537) says, that the dietetic plan is sufficient for the cure of the recent disease; but in an inveterate lues, decoction of guaiacum should be used. "Nec veniendum esse ad unctiones minerales, nisi ex medicinâ ligni sancti bis terve cognitum fuerit ægrum non convalescere. Nam hæc ligni medicina propria est ad morbum Gallicum curandum, ac præter cæteros maximè salutaris, nullæque remanent ex eâ corporis offensiones; quòd minimè fit ex argenti vivi aut cinabri medicinâ."*

Fernelius, also, equally celebrated as a theoretical and practical physician, observes, "Hydrargyrum his non esse antidotum, sed empiricorum inventum, quod tanquam fucò malo adhibent; neque à viris bonis et reipublicæ studiosis tam fallacem, incertam atque adeo crudelem curationem unquam tentari debere." After which, he remarks upon the preference he gives to guaiacum. Dominicus Leo recommends venesection, aperients, guaiacum, and so forth; rejects mercury, and explains how it came to be employed in this disease. "Curatio autem quæ ei passim ab impertiis præsertim per argentum vivum et minium adhibetur, ab eo morbo accepta est, quem recentiores chirurgi malam scabiem, malum mortuum appellant; alium tamen longè ab hoc morbo. Sed experientia et ratione comprobatur, quod nihil deterius est morbo Gallico affecto, quàm adhibere sive interius sive exterius, sub formâ unguenti vel summafigii ipsum argentum vivum; ex tali enim applicatione homines secundum membra principalia semper patiuntur." I have already given the observations of Fallopius upon mercury,—and it would be useless repetition to multiply quotations.

The first publication in which mercury is recommended in preference to other remedies in the cure of syphilis, is by Jacob von Bethencourt, 1527, who prefers it entirely to guaiacum; but these opinions were not repeated till long afterwards, and certainly first at the school of Montpellier. Thus Rondelet, Professor at Montpellier, 1527, observes, "Argentum vivum esse antidotum et maximè accommodatum remedium ad morbum Italicum (i. e. Gallicum), quia quocumque modo administretur, morbum curat:" and Antonius Laporta, a lecturer in the same school, and a friend of the preceding, 1570, says, "Eos cacutire et hallucinare, qui hunc pessimum morbum sine hydrargyro, depellere scribunt; cum experientia omnium rerum magistra, compertum sit, hunc morbum sine hydrargyri sodalitis curari non posse, quamvis ex illius malâ

* 'Nor ought recourse to be had to mineral ointments, till it shall be well ascertained that the patient is not benefited, after having repeatedly taken the medicine from the wood. For this is peculiarly efficacious in this disease, and above every other remedy, while no bad effects whatever ensue from its use, which is far from being the case with medicines composed of mercury or cinnabar.'

administratiōne multa corpori incommoda suboriantur.” Andreas Laurentius, also, of Montpellier, 1587, remarks, that syphilis may perhaps be healed by the methodic plan; but its complete eradication can only be effected by the employment of one of the specific remedies, such as guaiacum, sarsaparilla, china, mercurial frictions, and fumigations; and soon afterwards, Capo di Vacca enumerates, as different modes of treatment, the diet-drink, mercurial frictions and fumigations, antimony: he advises mercury to be administered if the disease has reached its highest point, and the constitution of the patient will permit it.

‘ We find the use of mercury becoming at this time universal; and there are very few writers among those of the seventeenth century who did not prefer it to every other remedy. At first they applied only mercurial ointment and cinnabar fumigations: afterwards, however, the internal administration of mercury was proposed, and either the metal itself in pills, the precipitates, and, still later, calomel. It ought, however, to be noticed, that exactly at the very time when they began to question the efficacy of guaiacum, and similar means in curing syphilis, and to make more use of mercury, many physicians entertained an opinion, that when the disease under discussion had once been admitted into the system it could not again be expelled; and that all the remedies recommended against it, were only able to restrain it for a time: it appears, also, that at that time the action of mercury was not so certainly curative as to have removed all doubt of its specific power. These doctrines met, as was to be expected, with vehement opponents: the use of mercury regularly advanced; and notwithstanding some voices were still raised, which would have confined this remedy to the severest cases, when all other remedies had been fruitless, Guerin, even as early as 1688, asserted mercury to be the only effectual remedy for the cure of lues. “Apage,” he exclaims, “tot hujus ætatis nebulones et sycophantes, qui decoctis ex malto ligni sancti cortice sassafras, radice sinarum jam æstuantia torrent viscera! Apage, lippientes tonsores, qui tabellis opiatitis pilulis, dum curationem pollicentur, verba dant ægris, ab inferunt necem.” In England, especially, the opinions of Wiseman and Sydenham appear to have had great influence; and the non-mercurial treatment was accordingly entirely neglected in that country. In vain, in 1673, did Nicholas de Blegny attempt to do justice to the diet-drink; of him Astruc observes, “Usum decocti sudorifici ex lignis guaiaci et sassafras, radicibusque chinæ ac sarsaparillæ usui mercurialium inunctionum si non præfert, saltem æquiparat, in quo ab opinione temere dissentire videtur, quæ jam suâ ætate vulgaris et pervagata erat, et quæ mercurio primas deferebat, in curandâ lue venereâ confirmatâ.”

‘ Thus then was the opinion of the specific effect of mercury fully established; it has continued to the present day, and it is perhaps impossible entirely to eradicate it; but that it is justly established, and that we may refuse without danger our assent to it, the few historical circumstances already mentioned, as also those later observations

which are yet to be noted, appear to prove. Some physicians, however, use the gradual introduction of mercury as a proof of its specific effect; and believe, that because all united in employing it, it must be the best, perhaps the only actual remedy of syphilis. But if we consider, how little in medicine can be built upon the general opinion of any one period,—how little the knowledge of the present day is in accordance with that of earlier times,—that also when the universal application of mercury in syphilis was established, rational medicine was at a very low ebb,—we may justly question the propriety of this conclusion; and we believe ourselves not only justified, but that it is our duty to institute observations independent of those old opinions, and to rely upon the results of our own later experience.

‘ After the position that mercury was indispensable in the treatment of syphilis had been clearly expressed and generally received, physicians confined their labours to altering and improving the mode of its application. They saw that many syphilitic maladies did not yield to the common preparations of mercury; they perceived, also, that at times the most dangerous consequences ensued to the system: they considered that by new preparations of this remedy the disease might be certainly overcome,—and hence ensued that mercurial syphilitic pharmacopœia (*jene merkuriell-syphitische pharmakopœ*) which, in later times occupy the greater parts of the works that are written on this disease. Different theories were proposed upon the *modus operandi* of mercury; the field of hypothesis was opened only to explain the mode in which this remedy restored the health, and which it was vain to expect from any other medicine; and according to the particular doctrines which each writer entertained upon this subject, not only his practice depended, but his opinions respecting the nature of syphilis.

‘ It was to be expected, that in so unnatural a state of the pathology of syphilis, a reaction would ensue; and this has happened. The cases which, in the different forms of disease, exhibited a deceptive similarity to lues, and yet healed either without medicine, or under very various treatment, were so numerous that they could no longer escape the knowledge of physicians. But instead of consequently disbelieving in the absolute necessity of mercury for the cure of syphilis, these cases had quite an opposite effect: the old opinions remained as before, and such cases were only considered as not syphilitic.

‘ The English physicians appear the earliest to have directed their attention to a more accurate distinction in the pathology of this disease; but I do not feel certain as to what writer first distinguished between genuine syphilis and diseases similar to it. John Hunter sought for the difference in the form of the primary sore; and since his time they have still regarded the form of the sore, the deep centre and hard edge, as characteristic of syphilis; to which was yet added as the most important source of diagnosis its incurableness without mercury. That the characters of the sore alone were not considered sufficient by Hunter, many cases related by

him completely prove; in which diseases having the appearance of genuine syphilis, and giving rise to secondary symptoms, healed without mercury: and these, he says, the result (that is, their spontaneous healing) prove not to have been syphilitic.

'The investigations of Abernethy, John Hunter's very zealous disciple, afford a very curious result in an historical point of view. He, deviating from the path proposed by his teacher, but evidently against his will, and contrary to the then generally received opinion in Great Britain, that genuine syphilitic sores would not heal without mercury, relates a number of cases perfectly resembling syphilis in their origin and progress, and at times attended with secondary symptoms; but in which, notwithstanding the employment of mercury was omitted, healing ensued. Taking for granted the truth of his fundamental position, he holds all these cases for pseudo-syphilitic, but cannot conceal the difficulty in which he is placed, as this pseudo-syphilis is distinguishable by no external sign from the genuine disease. He recommends mercury to be given in all primary sores, but in small doses, by which precaution no injurious consequences ensue, even should the case prove to be pseudo-syphilis. In the secondary symptoms, he enjoins delay in the application of mercury, as this will enable us to learn if the disorder inclines to a spontaneous cure, in which case an anti-syphilitic treatment would be unnecessary.

'We here find experiments and observations, the accuracy of which we cannot doubt, brought to accord with a doctrine which it entirely contradicts. It is a bad thing to form a diagnosis from the effect of medicine, the propriety of whose exhibition depends upon the correctness of the diagnosis.

'The earliest attempt to distinguish the circumstances of the disease which justify the application of mercury was made by Carmichael. It is, however, to be feared, that his division of these diseases into genuine syphilis (the Hunterian chancre) and the venereal diseases, and the last again into the superficial and the deep phagedenic ulcer; and the distinctions founded upon these of different secondary symptoms, according to the peculiar original forms; as also the limitation of the use of mercury to the first class, while in the last it is either useless or injurious; is perhaps too strict with reference to the diseases themselves, but certainly is so with reference to our knowledge of them. The observations made in the English military hospitals have not confirmed Carmichael's distinctions, as appears from the account of Sir James Macgregor and the tables of Dr. Hill. Whether Carmichael himself still maintains his published opinions, I cannot say with certainty; but I know that in the hospital which he superintends patients are very seldom treated with mercury.

(To be continued.)

IV. *An Account of several Cases of Poisoning with Arsenic, in Illustration of the Delicacy of the Chemical Evidence, and Weight of the Evidence drawn from Symptoms.* By ROBERT CHRISTISON, M.D., F.R.S.E., Fellow of the Royal College of Physicians, and Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.

[Concluded from p. 248 of our last Number.]

‘ CASE III.—Charles Munn, a butcher at Rothesay in Bute, was indicted at the Inverary spring circuit of 1824 for the double crime of murder by poisoning, and of procuring abortion. In order to shorten the narrative, I shall say nothing of the purely moral evidence. As usual in cases of the kind, it was circumstantial only; but the circumstances were very strong indeed. A part of the moral proof, however, was so intimately mingled with the medical, that the latter is not complete without it.

‘ The deceased, after being some time acquainted with the prisoner, became pregnant by him in the spring of 1823; and the child quickened in the month of August. Not long before that, and after the girl had told him her state, he on two occasions tried to buy, and probably did procure, poison, either personally or through means of a friend, for the alleged purpose of killing rats. It is likewise probable that he got poison on two other occasions afterwards, namely, about the end of August, and on the 4th of September.* The poisons supposed to have been obtained were tartar-emetic, or arsenic, or both.

‘ On the evening of the 1st of September he met the girl alone, and persuaded her to take two tea-spoonsful of a white powder in a tumbler of water, under the pretext that it would shew whether she was with child. The powder had a disagreeable taste, felt gritty, and was difficult to swallow. She had been but a short time at home, whither she went immediately after her interview with the prisoner, when she got sick, and began to vomit. The vomiting recurred frequently during the night; and next morning she was so unwell, that she could not go to her work till after breakfast. Previous to this illness she had uniformly enjoyed excellent health.

‘ On the evening of the 4th of September the prisoner again met her by appointment, when, after much resistance on her part, he prevailed on her to take another drug, in the form of a cake, which she swallowed with great difficulty. The pretext used this time was, that the drug would preserve her colour, and prevent people from knowing she was with child. Within half an hour afterwards, she was attacked as before, with sickness and vomiting; and the prominent symptoms from this time till the 9th, when a surgeon was first sent for, were vomiting, at first very violent and

* ‘ It was proved at the trial that he did get arsenic at the end of August.’

frequent; occasional purging, sometimes of blood; soreness of the mouth, and pain of the throat, stomach, and bowels; hoarseness, and oppressed breathing.

‘ When the surgeon first saw her, late in the evening of the 9th, the pulse was 120, full, soft, and regular; the skin hot and dry; the tongue parched and excoriated; the throat spotted inwardly with little white ulcers; the voice hoarse and feeble; the breathing hurried and laborious; swallowing painful and difficult; the belly round, swollen, and painful, but not tender to the touch; and she was also very exhausted, and complained of general soreness.

‘ On the morning of the 10th, another surgeon was asked to visit her, and his account of the symptoms appears very accurate and circumstantial. The pulse was 120, and throbbing; the breathing difficult; the tongue red and parched; the gums tender and shining, without salivation; she had soreness in the throat, descending along the gullet into the chest, and there was an excoriation on each side of the uvula, a white ulcer on the left tonsil, and redness and tenderness of the rest of the throat and back of the palate; she swallowed with such difficulty, that a small quantity of any liquid caused violent gasping, hurried cough, and much pain; she complained farther of sickness, and dull pain and tenderness in the stomach and bowels; and likewise of pains in the feet and legs. The vomiting continued to recur throughout the day. In the evening the fever had increased; the pains of the feet and legs were also more severe; and she complained of soreness and tenderness of the labia pudendi, though in neither situation any unnatural appearance could be discovered.

On the 11th and 12th there was not any material alteration in the symptoms, except that on the evening of the former she had some delirium; that on both days the fever lessened considerably in the morning, and increased at night; and that the pains had abated a little. About midnight of the 12th, she was taken ill with labour pains, and in three hours brought forth a still-born foetus, weighing nineteen ounces, and apparently between the fifth and sixth month. The delivery was difficult and distressing; and although there was no flooding, she was so feeble that the midwife did not expect her to survive. The motions of the child had ceased on the 6th.

‘ On the forenoon of the 13th she was easier, and the vomiting had ceased. From this time till the 16th, the fever continued, with morning remissions and evening exacerbations; but all the pains had abated, with the exception of those in the feet and legs. She had occasional purging, however; and on the 15th, she was attacked with pains in the hands like those in the feet. Till the 16th her medical attendants thought her in great danger. But on that day she was so much better in every respect, that she was able to undergo a judicial examination; and for fourteen days afterwards her state continued to improve rapidly. Still she was by no means well; and in particular she complained of want of power in the

feet and hands, and of such severe pain in them, that she could not sleep without opium.

‘ On the 1st of October the prospect changed. She was seized with headach, restlessness, return of fever, and loss of appetite; her sufferings went on increasing steadily, her strength decayed; and she died, with symptoms of low fever, on the 19th of the same month, forty-five days after taking the second drug from the prisoner.

‘ Such is an abstract of the history of the case taken from a very minute report, which was drawn up by the attending surgeons. The following particulars were added by them, in consequence of certain queries transmitted by Dr. Duncan and myself. The ulceration of the throat was of an aphthous nature, and disappeared long before death. There was a slight eruption of the skin at an advanced period of her illness, and immediately after she had perspired; but its precise nature was not described. The eyes and nostrils were not affected. The affection of the labia pudendi was nothing more than tenderness to the touch. To a query regarding the existence of irritation in the urinary organs, no answer was returned. We were particularly desirous to ascertain distinctly the nature of the affection of the extremities; and we accordingly learned, that the want of power in the feet and hands, mentioned in the report, was diminution merely, not loss of power; that it resembled the stiffness and debility which follow rheumatism; that the patient could not grasp firmly; and that this weakness, as well as the pains, extended as high as the legs and fore-arms.

‘ I have not taken notice of the treatment, as it is not essential to my present object, and presents nothing new or interesting: it was perfectly judicious throughout.

‘ The body was examined judiciously the day after death.

‘ The membranes of the brain were red and vascular, and serum was effused between the arachnoid and pia mater. The points of blood seen on cutting the brain were more numerous than usual. The ventricles contained a little serum.

‘ The sac of the pericardium also contained a little serum. The heart was sound. The lungs adhered to the chest by firm adhesions, but were themselves healthy.

‘ The stomach was natural in appearance outwardly; it contained a little curdled milk: its villous coat had a slight red colour at various points; and at the pyloric end of the lesser curvature it was very vascular, and of a dark red hue. The redness was a diffused, brownish-red blush, not referrible to vascularity by the naked eye, and disposed in spots as big as a crown-piece. The small intestines were every where red and vascular; and at one part the gut was thickened along three inches of its course. The colon was red and vascular where it lies over the lower end of the stomach. No ulceration was visible in the whole alimentary canal. The uterus was large, but healthy, except at the mouth, where it was very hard, and of a dark red colour. The vagina was natural in appearance; and so were the liver, spleen, kidneys, and bladder.

' The case now related is evidently very complex in a medico-legal point of view ; but, like many others in medical jurisprudence, it is by no means doubtful when the questions involved in it are clearly separated, and duly considered. The chief questions that arise out of it are, 1st. What was the cause of the miscarriage? 2d. Were the symptoms that prevailed before and after the miscarriage owing to natural disease, or to poison,—that term being understood in a general sense? 3d. What particular poison could occasion such symptoms? and, 4th. What was the cause of death?

' 1st. There cannot be the least doubt that the deceased's miscarriage was owing to the violent irritation of the system, or consequent debility, or both together,—whatever that irritation or debility may have arisen from.

' 2d. With regard to the second question, whether the disorder which caused her miscarriage arose from natural disease, or from poison (in a general sense), the answer must be drawn from viewing the symptoms only, together with such moral circumstances as require medical knowledge to appreciate them. There is not any chemical proof: neither can the appearances after death be taken into account, for the cause of death, as will be seen by and by, is much more obscure than the cause of the earlier symptoms. It may be remarked, in passing, however, that the appearances after death are not hostile to the idea of poison having been taken.

' Now, in the *first* place, the qualities ascribed by the prisoner to the drugs he persuaded the girl to take, are not only such as no drug possesses, but also such as no drug is thought even by the vulgar to possess; and hence it is very likely that he knew he was giving something deleterious. The intention of the person who administers poison is not often learned from medical evidence, and therefore must in general be left out of view by the medical witness. In the present case, it is to be inferred partly from moral, partly from medical circumstances, and is therefore necessarily a part of the medical proof in the question now discussed. *Secondly*, The events which followed correspond with the idea that the drugs were poisonous. On each occasion, after taking them, the girl was attacked in the way we should look for had they been acrid poisons; and on each occasion, too, she took ill within the short period in which the acrid poisons begin to act. But, *thirdly*, Might not her illness have arisen also from natural disease? This point will be better considered under the next question, namely, What poison could produce such an illness? Meanwhile, I may anticipate the conclusion, that scarcely any, perhaps no, natural disease is known, which could produce symptoms of such variety, and so curiously combined.

' Laying all these considerations together, it appeared to Dr. Duncan and myself *very probable* that the primary disorder, under which the girl laboured between the 4th and 30th September, was caused by some acrid poison. In order to see fully the influence of this opinion on the case, it must not be forgotten that the moral

circumstances were very strong, and that an opinion in favour of high probability was therefore quite enough to settle the verdict of the jury.

‘ 3d. The third question regards the particular poison which could produce the illness under which the girl laboured betwixt the 4th and 30th of September. Under this head will be considered in detail one of the chief objects of my paper, the possibility of at times forming a decided opinion on charges of poisoning with arsenic from symptoms alone.

‘ I have said, that medical jurists, in passing from one extreme to another, and maintaining that a decision in favour of poisoning can never be founded on symptoms only, appear to have established a rule liable to many exceptions. From individual symptoms, indeed, it is quite impossible to derive good proof; for there is not a single symptom which may not equally arise from natural disease. It is probably by confining themselves to this narrow view of the symptomatological evidence, that witnesses have been led to under-rate so much its conclusiveness; and they appear to have taken this narrow view of it, partly in consequence of their examination on trials being, for obvious reasons, directed as much as possible to insulated facts in the case, partly in consequence of the declared opinion of some medico-legal authors. Both witnesses and authors, therefore, have kept too much out of sight the peculiarities arising from the union of various symptoms, the order in which they are grouped, and the circumstances under which they occur together. When these peculiarities are duly considered, it will not be difficult to perceive that the rule mentioned above must be liable to exceptions.

‘ The exceptions alluded to, are admissible exactly when they are of the greatest consequence. For, on the one hand, they regard chiefly poisons in common use for criminal purposes; and, on the other, they are admissible in many of those cases in which, by reason of the lingering death, or ultimate recovery of the patient, chemical evidence is often unattainable.

‘ There are some poisons, the symptoms of whose action are generally so characteristic, that an experienced person cannot confound them with any natural disease, or with any other poison. Others possess this characteristic action more rarely. Of the first kind are *oxalic acid* and *strychnia*; of the second, *corrosive sublimate* and *arsenic*.

‘ Few opportunities have hitherto occurred for ascertaining correctly the symptoms of poisoning with *oxalic acid* in those most frequent cases in which it proves fatal within an hour. The instances, however, which have been accurately observed, coupled with what is known of its effects on animals, lead to the conclusion that it generally causes a very sour taste,—a sense of burning along the throat and gullet in the act of swallowing,—acute burning pain in the stomach immediately afterwards,—then violent vomiting,—next sudden failure of the pulse and strength,—and death in ten, twenty, thirty, or sixty minutes, sometimes under a state of pure

and rapidly increasing faintness, sometimes at the close of one or more attacks of violent tetanic spasm.* Such a succession of symptoms, within such an interval, cannot be caused by any other poison,† or by any natural disease, or combination of diseases, with which I am acquainted.

‘*Strychnia* is another poison which causes almost invariably symptoms quite characteristic of its action. If, within a few minutes after taking an intensely bitter substance, a person is attacked with pure and violent tetanus, recurring in frequent fits, and proving fatal in five, ten, twenty, or sixty minutes, I cannot conceive it possible to draw any other inference, than that death has arisen from poisoning with strychnia, or some of the poisons which contain it. These symptoms are almost invariable, at least in the case of strychnia itself. There is a way, indeed, in which this alkaline principle might be administered, so as to act differently, and to render it difficult to form the foregoing opinion. For obvious reasons I shall not mention it. It could only be tried with success by one very well acquainted with the properties of the poison. On the whole, therefore, a decided opinion may be drawn in almost every instance from symptoms only; and this is a point of consequence, because other medical evidence will seldom be attainable, and nothing but the difficulty of procuring the drug keeps it now out of the hands of the prisoner.

‘*Corrosive sublimate* is one of the poisons that produce characteristic symptoms only on some occasions. Several cases are on record, in which it has caused a strong metallic and astringent taste,—a sense of corrosion and burning in the throat or gullet, or both, in the act of swallowing,—acute burning pain in the stomach and belly soon afterwards,—speedy, violent, and often bloody vomiting,—afterwards purging of the same description; and on the second or third day, or a little later, more or less salivation, with fetor of the breath,—ulcers of the gums,—dropping out of the teeth, and even gangrene of the mouth,—all the signs, in short, of true mercurial salivation. In the event of such a case occurring in a criminal court, I cannot see how a witness could avoid giving the opinion, that corrosive sublimate, or some soluble salt of mercury, had been taken.

‘I hope it will not seem altogether foreign to the object of the

* ‘This last symptom has not been noted in any of the cases hitherto published of poisoning in the human subject. As, in similar circumstances, Dr. Coindet and I found it to be almost invariable in our experiments on animals, I should have felt surprise at the difference, did I not consider that very few of the cases have been seen at the point of death by a medical man, and that the symptom is almost a momentary one. (See our paper in the *Edin. Med. and Surg. Journal*, April 1823.)

† ‘The mineral acids, which in many respects resemble oxalic acid in their action, do not cause tetanic spasms, and never prove so speedily fatal. Of the fifty-six cases reported by Tartra, in his excellent work on Poisoning with Nitric Acid, none proved fatal in a shorter period than six hours. (*Traité de l’Empoisonnement par l’Acide Nitrique*, p. 160.)’

present paper, if I illustrate the doctrine now laid down, by referring to a trial, in which it might, in my opinion, have been properly applied. The trial, I cannot help thinking, is on many accounts one of the most interesting to the medical jurist that has occurred in this country since that of Captain Donellan. As the case is related at considerable length in Dr. Duncan's Journal for October 1824, and the account was drawn up by myself, I shall notice it briefly. The documents were supplied to me by the chief crown witness, Dr. Brown, of Bishop-Wearmouth.

With the intent of the prisoner, who was a surgeon in Sunderland, I must premise I have nothing to do. It is derived, indeed, in a great measure from purely medical evidence. But he was found not guilty by a jury of his countrymen, and therefore the question of his guilt is not a fair subject of criticism. The person he was accused of poisoning was his wife; and at the time she had been for some weeks ill of rheumatism, for which Dr. Brown, her physician, ordered her calomel and opium every evening. The suspicious symptoms began when she was in the act of swallowing three pills prepared by her husband from Dr. Brown's prescription, and composed, if they had been rightly prepared, like those of the previous days. The first of them caused so painful a sense of burning in the throat and gullet, as led her to express fears that some mistake had been committed; but she was nevertheless persuaded to take the other two, which immediately increased the burning sensation to such a degree that she cried out. When the physician saw her, about an hour afterwards, the leading symptoms were a constant and severe sense of burning in the fauces, throat, and gullet, down to the pit of the stomach, small quick pulse, and frequent vomiting. Next day she had some diarrhoea, and on the third day true mercurial salivation; but she ultimately recovered. The two last symptoms, for reasons I cannot comprehend, were not brought out at the trial.

I was desirous of obtaining information of the exact taste which the lady felt on swallowing the pills. This she was unable to give any account of; but, according to the evidence at the trial, three medical people and the prisoner agreed, that the matter left on the marble slab where the pills had been made up, "tasted like corrosive sublimate."

There are only two things in this case which can impede the inference that corrosive sublimate was taken; the administration of calomel for three days before the suspected pills were given; and the possibility of ptyalism having arisen from other causes besides the administration of mercury. The latter fallacy cannot be allowed any weight in the present case; for the physician shewed himself by far too close an observer, to confound the mercurial variety of ptyalism with any other. As to the previous administration of calomel, that, I admit, renders the ptyalism equivocal evidence. Yet the doubt might have been removed by other circumstances. Besides, it was more than compensated by the additional fact, that, after the signs of poisoning had begun, the lady was on the point of

taking a draught prepared by the prisoner, when its colour roused Dr. Brown's suspicion; and he found, by analysis, that it contained fourteen grains of corrosive sublimate.

‘ I shall now close this subject by endeavouring to shew that *arsenic* is another poison which may at times produce symptoms such as cannot originate in any other cause.

‘ Arsenic, when it does not prove fatal, or only after a week or upwards, often causes a singular complexity of symptoms, denoting inflammation, or at least violent irritation in the throat, gullet, stomach, and intestines; in the windpipe; in the mucous membrane of the eyes and nose; in the urinary bladder, urethra, and vagina; in short, in the whole mucous surfaces of the body. In such cases, too, there are occasionally eruptions of the skin; sometimes petechial; sometimes measly; sometimes miliary. And more frequently, the inflammatory symptoms are accompanied or succeeded, on the one hand, by complete or incomplete palsy of one or more of the extremities, and sometimes, too, racking pains in the palsied parts; or, on the other hand, by frequent fits of epilepsy, or by both together. No medical jurist could doubt that arsenic had been given if he met with such a conjunction of disorders. They cannot be produced by any other poison, so far as our knowledge goes; and as little can they be caused by any natural disease, or any union of diseases ever known. It is true, that such a union of symptoms from natural causes is conceivable. But if it is so, it could never take place without its origin being clearly pointed out by collateral circumstances.

‘ The rule now laid down might have been applied, in my opinion, to two trials which happened in Britain not long ago. It might have been applied in the case of the family poisoned by Eliza Fenning, at London, in 1815; and it was actually applied in the case of George Thom, who was condemned at Aberdeen in 1821, for poisoning his brother-in-law's whole family. Of the former case a minute account has been published in a treatise on arsenic, by the crown witness Mr. Marshall. Of the latter a very interesting relation has been given in the 18th volume of the Edinburgh Medical and Surgical Journal. I must be content with simply referring to these cases, and proceed to inquire how far the rule may be applied to that which happened at Rothesay. I may remark, in passing, however, that the symptoms I have enumerated above were not all present in either of them; that most of them were present in the second; that enough of them were present in both to support the opinion; and that, in both instances, the opinion was farther upheld by the important fact of several people having been taken ill at the same time, in the same manner, and under the same circumstances.

‘ In the case I have related, which occurred at Rothesay, it is likewise very probable, if not certain, that arsenic was given. If we assume that some poison was given, which, from moral grounds, and the medical probability of general poisoning, there was no reason to doubt, then there can be as little doubt that arsenic was

the poison ; and thus the case may be settled at once. But I promised to consider, in the present place, the possibility of the girl's illness between the 4th and 30th of September having arisen from natural disease. Now, it appears from the narrative, that she laboured under symptoms of general irritation of the whole alimentary canal, from the throat downwards ; and that she had latterly an affection of the extremities, which if not incomplete partial palsy, did at least greatly resemble it. Of the other symptoms mentioned above, as often caused by arsenic in lingering cases, some were not present, others were not inquired into. It is very likely that a stricter inquiry would have added other important symptoms to the list ; but even as they stand, I question whether any natural disease could produce them. Can any natural disease, known in this country, cause *simultaneous* inflammation of the whole alimentary canal, followed by a disorder so like partial palsy ? Dr. Duncan and I agreed that such a case had never come under our notice ;—that we considered it, however, as of possible occurrence, because we had known aphthous inflammation to attack the different parts of the alimentary canal *successively*, while, at the same time, the affection of the limbs was perhaps not very clearly of the nature of partial palsy ; and, therefore, that arsenic was very probably the substance given ; but that we could not speak with certainty on the subject.

‘ So much for the force of the symptomatological evidence in what may be called the chronic form of poisoning with arsenic. Perhaps a thorough investigation of the subject would lead to conclusions not materially different in those commoner cases in which the poison proves rapidly fatal. In the most frequent description of cases of poisoning with arsenic, and other irritant poisons, death takes place within two days and a half ; the symptoms indicate inflammation of the stomach, of the whole intestines, and even of the throat and gullet ; the affection of the throat precedes the vomiting ; the vomiting is often bloody from time to time ; and after death there are found, sometimes in the whole alimentary canal, but at all events in the stomach, either decided marks of inflammation, or great turgescence of vessels. Can any natural disease produce such a train of effects ?

‘ There are three diseases, whose effects are somewhat similar,—acute inflammation of the stomach,—cholera,—and the affection to which several late French authors ascribe spontaneous perforations of the stomach.

‘ *Acute inflammation* of the stomach is precisely the disorder caused by arsenic and other irritants, when they prove quickly fatal. Does it ever arise from any other cause *in this country* ? Medical jurists have certainly exaggerated its frequency as a natural disease. I have consulted many practitioners in extensive practice in this city ; but no one can remember to have seen it as such.*

* ‘ There is a form of peritonitis which I have seen fatal in one or two days ; and after which hardly any morbid appearance is visible. Several of

Cullen's variety, the *gastritis erythematica*, certainly occurs as an idiopathic disease; I have myself seen it. But being chronic in its course, it cannot be confounded with the cases of poisoning now alluded to.

'Cholera is the disease which the medical jurist finds the greatest difficulty in distinguishing from the effects of poisoning with the acrids. Yet I think a diagnosis may be often drawn. 1st. In cholera, the vomiting is never bloody. Even in the epidemic cholera of the East, it is not; at least no such symptom is mentioned in the reports lately published by the three Indian Presidencies. 2d. The sense of burning in the throat and gullet, at all times a rare symptom in cholera, always *succeeds* the vomiting. 3d. I doubt whether the cholera of this part of the country ever proves fatal in so short a time as two days and a half. At least, according to the experience of all my acquaintances it does not.

'The disease described by Chaussier, Laisné, Cruveilhier, Jaeger, and other French and German pathologists, as producing *spontaneous perforations* in the stomach, is of questionable existence.* At all events, there is no doubt that the same perforations take place also after death, and when during life there was no symptom of disease in the stomach. If the continental pathologists are correct, the symptoms closely resemble those of acute poisoning with the acrids. The vomiting, however, is never bloody; and the appearances in the dead stomach are quite peculiar, and perfectly characteristic.

'These remarks I throw out merely as hints for future investigation. The question involved in them is far too important to be decided by the information to which I have access at present.

'4th. The last question in the case relates to the cause of the girl's death. This question is involved in obscurity.

'The surgeons of Rothesay having taken, in my opinion, an erroneous view of it, I should have been glad to arrange my remarks regarding it in the shape of a commentary on their report. But although they adhered to their views after seeing the report drawn up by Dr. Duncan and myself; yet, as I do not know how far they likewise adhered to them at the trial, it would be unfair to make them the subject of criticism. I may merely mention, in general terms, that, in their opinion, if poison was the cause of the girl's first illness, it was also the cause of her death.

'It is clear, however, that the symptoms under which she died were quite different from those which followed the taking of the poison: neither do I think that the former can be justly held as having been gradually evolved from the latter. The essence of the case was, that she had a tedious attack of inflammation of the whole alimentary canal; that this had been giving way steadily for

my acquaintances, to whom I have shewn this paper, have referred to a similar affection as a source of fallacy; but it is not attended with pain in the throat, or vomiting, or purging.

* See Gairdner, in Edin. Med. Chir. Trans. vol. i.

a fortnight, and had at length almost vanished, when she was taken ill with symptoms like those of general fever, and died in that state. Now, although the general fever might have been caused by her miscarriage, or possibly even by the more immediate effects of the local inflammation, under which she laboured from the 4th to the 16th of September; yet it might also have arisen from other equally probable and more common causes, those, namely, that operate as exciting causes of fever generally; and hence her death could not be attributed with any certainty to the direct or indirect operation of poison.

‘ On the contrary, the irritant poisons are remarkable for the steady progress of their symptoms. There may be a few remissions and exacerbations; but otherwise the case goes on very uniformly till the person dies or recovers. They are likewise remarkable for the homogeneity of their symptoms: that is, their character as to kind remains much the same from first to last. Some of them, indeed, do not come under this observation; for many which have been classed with the irritants are really narcotico-acrids; and in their case the symptoms of irritation often give place to those of nervous derangement, such as coma, palsy, epilepsy, and the like. But I am not aware of the existence of any poison, which, after it has caused inflammation of the alimentary canal, and that has subsided, can then excite a protracted general fever, unaccompanied with local disease.

‘ This remark applies with peculiar force to the poison believed to have been given in the present case. Among the numerous examples of poisoning with arsenic, which are to be found in authors, neither Dr. Duncan nor I could remember any one at all parallel. As it was only from the occurrence of parallel cases that an opinion in favour of death by poison could be drawn, we were necessarily led to agree, that the real cause of death could not be specified with any certainty.

‘ I have since met with a case somewhat analogous; but it is by no means so similar as to warrant the drawing a parallel between it and the one now under review. It is a case of poisoning from the application of arsenic to the sound skin, related in detail, with several others of the same kind, by Dr. Schulze, a German physician, in Knappe’s *Annals of Medical Jurisprudence*. The person had an attack of violent inflammation of the head, face, and neck, attended with high fever, in consequence of getting himself powdered with arsenic instead of hair-powder. In the course of a fortnight the symptoms put on the form of a nervous fever; which, after first abating in a few days, suddenly returned with an attack of rigors, and proved fatal two days afterwards.*

‘ With these observations I conclude the case and paper. The prisoner Munn was found guilty of the crime of procuring abortion by administering poison; but the charge of murder was found not proven.’

* ‘ *Kritische Annalen der Staatsarzeitkunde*, i. 153.

SECTION III. — INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. Farming the Sick Poor.

IN our last Number we gave insertion to the resolutions passed at a late meeting in Warwickshire, by which Dr. Conolly was authorised, as Honorary Secretary, to enter into an extensive correspondence for the purpose of procuring correct information concerning the manner in which the sick poor are supplied with medical and surgical attendance in different parts of the kingdom. The following letter and queries are about to be forwarded to several individuals in and out of the profession, from whom it appears probable that important information will be obtained. As the information thus acquired will in all likelihood form the groundwork of a subsequent application to Parliament, we trust that it will be deliberately given; and as the Secretary's correspondence must necessarily be limited, we hope the medical press generally, as well as any individuals in the profession who may notice these observations, will give encouragement to the investigation, by a willing contribution of such facts as they may be acquainted with. The high respectability of the committee by whom the inquiry is conducted,* is a sufficient guarantee that nothing wild or fanciful, nothing injurious to the medical profession, is either contemplated, or at all likely, under any circumstances, to be adopted by them. Complaints are made daily in almost every part of the country, of the great evils arising from the present parish arrangements relating to the sick. Medical men on this subject do not at all differ from the public. But all parties acknowledge, that it is difficult to suggest any plan by which the evils now complained of would be done away, without other evils being incurred. These circumstances fully justify the exertions now making, in a part of the country where the subject has attracted particular attention, to lay the matter before the public and the profession, and to endeavour to obtain the aid of such talents as may at any time have been employed in the consideration of this branch of the pauper economy. There are few individuals who have had much experience of country practice whose memory could not supply them with strong illustrations of the iniquity of farming the parish sick; and there are doubtless many who have, at some time or other, endeavoured to devise new arrangements, more consonant to good feeling and to humanity. Although such attempts may yet have only led to a conviction of the difficulties of the subject, a communication of their nature may now become serviceable; and no higher inducement can be held out to aid in this inquiry, than that it may have for its results the increased comfort of the poorer classes of this kingdom when afflicted

* In addition to the names published in our last, we understand that the Members for Warwickshire and the town of Warwick have allowed theirs to be added to the list of the committee.

with sickness, and the elevation of the professional character in the eyes of an enlightened, active, and charitable public.

The circular letter and queries are as follow :—

SIR,—Particular circumstances have, within the last few years, drawn the attention of the resident gentry, clergy, and medical practitioners of this country, to the state of the sick poor of parishes, and more especially to what may be called the general mode of providing medical and surgical attendance for paupers by contract.

The result of a good deal of inquiry into the details and effects of this custom of farming the parish poor, or, in other words, of letting them to the lowest bidder, is a conviction, on the part of those who have conducted it, that there exists a very small chance of any beneficial change being effected by individual, or even combined efforts, without the support and authority of a legislative enactment.

For these reasons a committee has been recently formed, the nature and duties of which will be best explained by inserting the resolutions passed at the meeting at which it originated.

[Here the proceedings of the meeting, as given in our last Number, are inserted.]

The first object of this committee is to gain information from intelligent and respectable persons, and particularly from the clergy and medical practitioners: their future proceedings will, of course, depend upon the character of the information so acquired.

You will, therefore, not only confer a great obligation on the committee, but also, it is presumed, be doing a considerable service to the sick poor of this kingdom, by giving your attention to the following questions, and replying to them more or less at length, at your leisure.

I have the honour to be, Sir,

&c. &c. &c.

‘ 1st. What is the general plan of providing medical and surgical attendance for the parish poor in your neighbourhood ?

‘ 2d. Does it appear to you that this plan is open to serious objections; or, do you consider it efficient to the end proposed, namely, providing for proper attendance on sick paupers ?

‘ 3d. Can you suggest any better method of effecting this, which you consider, at the same time, to be practicable and capable of general application ?

‘ 4th. Do you think that, generally speaking, the expenses of sickness lead more frequently than any other circumstances to applications for, and dependance upon, parish relief ?

‘ 5th. Are you of opinion, that any system of mutual assurance against the expenses of sickness would obviate this ?

‘ 6th. From an outline of the plan now forwarded to you, does it appear to you that Mr. Smith’s District Dispensaries, if generally established throughout the country, would have this effect ?*

* A particular account of the District Dispensaries was given in our Number for March last. A copy of the rules will of course be forwarded with the above queries.

The answers to these queries cannot fail, it is supposed, to produce numerous well-weighed opinions on every point connected with providing medical and surgical attendance for the poorer classes of society.

Application has been made in the proper quarter for leave to have the whole of the correspondence franked. In our next, we shall again allude to this circumstance, in order to enable those who wish to communicate with the Secretary to do so in the most convenient manner.

II. Royal College of Surgeons in London.

BY-LAW OF THE COLLEGE, AND STANDING ORDERS OF THE COURT OF EXAMINERS, RELATING TO THE AGE AND PROFESSIONAL EDUCATION OF CANDIDATES FOR THE DIPLOMA.

BY-LAW, sect. xvi. § 1.—No person under twenty-two years of age shall be admitted a member of the College.

Standing Order, 1.—The only schools of anatomy and surgery recognised by the Court, are London, Dublin, Edinburgh, Glasgow, and Aberdeen.

2. Certificates of attendance upon the chirurgical practice of an hospital will not be received by the Court, unless such hospital be in one of the above recognised schools, and shall contain, on an average, 100 patients.

3. The Court will, however, receive as testimonials of education, certificates of attendance on provincial hospitals, containing, respectively, 100 patients; provided a student shall have previously attended two courses of anatomical lectures, and two courses of dissection, in any of the recognised schools of anatomy. But the Court require that the term of attendance on such provincial hospitals shall be of twice the duration of that required at hospitals in any of the recognised schools of anatomy.

Candidates will, conformably to the above by-law and standing orders, be required respectively to produce, prior to examination, certificates:

1. Of being twenty-two years of age.
2. Of having been engaged six years at least in the acquisition of professional knowledge.
3. Of having regularly attended three winter courses, at least, of lectures on anatomy and physiology, delivered at subsequent periods; and also one winter course, at least, of lectures on surgery.
4. Of having performed dissections during two or more subsequent winter courses.

And of having diligently attended, during the term of at least one year, the chirurgical practice of one of the following hospitals:—St. Bartholomew's, St. Thomas's, the Westminster, Guy's, St. George's, the London, and the Middlesex, in London; the Richmond, Stevens', and the Meath, in Dublin; the Royal Infirmary, Edinburgh; the Royal Infirmary, in Glasgow; or the Royal Infirmary, in Aberdeen; or of twice that term in any of the provincial hospitals, conformably to the above standing order, No. 3.

Such certificate must also express the dates of the commencement, and of the termination of attendance on each course of lectures, and of dissections; and the periods of the commencement and of the termination of attendance on hospital practice. The required certificates must be delivered at the College ten days at least prior to the day on which candidates shall respectively be desirous of admission to examination.

Candidates under the following circumstances, and of the required age, are also admissible to examination:—

Members of any of the legally constituted Colleges of Surgeons in the United Kingdom.

Graduates in medicine of any of the Universities of the United Kingdom, who shall have performed two or more courses of dissection, as above specified, No. 4; and who shall have regularly attended chirurgical practice of one of the hospitals, as above described, No. 5.

By order,

EDMUND BELFOUR, Sec.

Lincoln's-inn-fields, Sept. 8.

III. *Poisoning from Putrid Food.*

THE subjoined statement of some circumstances of recent occurrence in the south of Scotland, signed by two medical gentlemen, has appeared in many of the papers, and deserves a place in the REPOSITORY. The details of the treatment might have been clearer; and we think there must be some error in the passage in which brandy and blood-letting are both spoken of as stimulating the heart.

'The farm of Gillespie, in the parish of Glenluce, skirts the shore, is about six miles from Glenluce, on the Portwilliam road, and is managed by a grievie, who has several families of cottars under him, mostly Irish, and who live in small cottages adjoining each other. On Friday, the 1st current, a lad of about eighteen years of age, eldest son of James Martin (one of the cottars), discovered, on the sea beach, the body of a very young calf, which, to all appearance, had been washed in by the morning's tide. The said youth skinned the animal, and took the skin home; and although there was plenty of other victuals in the house, his mother carried away a portion of the flesh, washed it well, put it into a pot, with fresh water, and, on going to bed, allowed the contents to simmer over the fire till the next day, Saturday. As the dinner hour approached, the flesh was carefully separated from the bones, minced small, and fried with butter, salt, and pepper, in a pan made of pot-metal. Of this meal, James Martin, his wife, and six of their family, partook—one child only refusing to taste it—as also four children belonging to John Smith, who lodges under the same roof, and a little girl, daughter of another cottar, a shepherd's daughter, of the name of Templeton, and an old woman from Glenluce, all ate, though the last two rather sparingly, of the veal. Indeed, the shepherd's daughter only took a few tea-spoonsful, while the old woman's portion of the putrid mess did not, she says, exceed the first joint of her

thumb in bulk. As no bad consequences were apprehended, the grown persons went to work, and the children to play; but in the course of three hours or so, James Martin was seized with pain in the stomach, severe diarrhoea, great desire to vomit, and other symptoms indicating complete exhaustion of body. Martin had eaten freely of the veal, and he died about nine o'clock the same evening. All the others became similarly affected; and the debility and narcotic effects were so great, that when the surgeons arrived they found them in a comatose state; their countenances pale and livid; pulse small, and, in some of the patients, scarcely discernible. Before strong emetics of sulphas zinci could be administered, the patients had to be shaken repeatedly, with the view of rousing them; and when left to themselves, they immediately relapsed into a lethargic state. Emetics, with warm water to promote their action, were given to all, save poor Martin, who died just as the surgeons arrived; and plenteous vomiting was further incited by introducing a feather into the œsophagus. Strong purgatives followed the emetics; and although they took effect in every case, the patients next day exhibited such heaviness and prostration of strength, that brandy and water was administered in pretty strong doses, with the view of stimulating and restoring the nervous energy. During the first night, persons were employed to keep the patients from sleeping, as sleep seemed to be to each the forerunner of death,—and by the third day all, with the exception of the girl, and the old woman Miller, were able to rise and walk about; and though these individuals are still confined to bed, their ultimate recovery is not doubted.

‘The patients, when at the worst, looked wild and stupid on being roused and shaken, as it were, into consciousness; and, independently of a deadly cadaverous hue, there was something almost indescribable in the expression of their countenances. The poor children, as they became affected, laid themselves down wherever they happened to be playing at the time; torpor, in this situation, soon overtook them; and two of them who were missing, were found after dark in a potatoe field, locked in one another’s arms, as if fast asleep.

‘The remains of James Martin were interred early on Monday morning. Indeed his body became so soon putrid after death, that a coffin had to be made on Sunday. On examining part of the mess of food, nothing remarkable was distinguished, save blackness and fetor; but the uncooked veal had a white and shining appearance like glass, and was evidently in such a mortified state that its smell alone went far to occasion nausea and fainting. Appearances, however, must have been very different when the veal was taken from the sea, if we may credit the testimony of the woman who cooked it, who persists in stating that it had then no smell whatever. If a portion of it, as seen on Sunday, had been applied to a fresh wound, the probability is, that death would have ensued; and it appears, that putrid animal food, when taken into the stomach, produces narcotic effects on the nervous system, similar to those

superinduced by a poisonous dose of opium or hemlock. Bleeding, which was resorted to in some instances, appeared to have an excellent effect, and particularly in the case of Martin's son, the young man who found the calf. When life was nearly extinct, and even after the emetics and cathartics had been tried, the bleeding stimulated the action of the heart, and restored the pulsation. The brandy, too, was singularly efficacious; and it may be said, in conclusion, that the above is one of the most extraordinary cases that ever occurred in this part of the United Kingdom.

‘ J. HEWETSON, }
‘ A. M'CRACKEN, } *Surgeons.*

‘Glenluce, 5th Sept. 1826.’

IV. *Journal Complémentaire du Dictionnaire des Sciences Médicales.*

THE *Journal Complémentaire* for August last contains a very excellent paper upon the experiments that have been made in the last few years for elucidating the obscurities of the sanguineous circulation. The author, Doctor Pierre Guillaume Lund, has entered at considerable length into the experiments of Verschuur, Hoffman, Thomson, and Hastings, on the one hand,—and Bichat, Nysten, Magendie, and Parry, on the other, respecting the irritability of the arteries. He has also referred with much judgment to a dissertation upon the dilatation of arteries by Arthaud, published at Paris, in 1770. He divides physiologists on this subject into three sects. *The first*, attributes an active part to the arteries in the circulation, by reason of their vital properties: *the second*, trusting only to their mechanical properties, allows them only to be passive—i. e. to assist by returning upon themselves; the third absolutely allows them no place at all. Hastings is mentioned as representing the first sect—Magendie the second—Bichat, Parry, and Johnson, the third. The author inclines to the last opinion, but we believe incorrectly. We do not think Hastings's experiments conclusive on this head; and we are aware of some sources of deception,—but we cannot believe them without any farther participation than that of mere canals in the circulation of the blood. Each of the extreme parties has appeared to us to have carried their opinions too far; and Magendie, if he errs at all, errs in not recognising the modifications that arise from the connexion of the arteries with the nervous system, which, many facts incline us to believe, is more intimate than what is allowed by Dr. W. Philip. The paper, however, is well worthy attentive perusal.

Clinical Report of the most prevalent Diseases during the preceding Month.

SEPTEMBER has been much cooler than August; and there has been a considerable quantity of rain during the month, with intervals of very dry weather. The nights are become cool, and there have been some frosts.

The remarkable feature of the last three months, in a medical point of view, has been its extreme healthiness. Seldom has so long a period passed without more epidemic disease than has existed during July, August, and September. The inquiries we have made from private practitioners, as well as our own opportunities of observation in extensive dispensaries, all concur to the same point. September, though less healthy than the preceding months, has yet been much more free from disease than usually happens. As might be expected, the principal malady has been diarrhoea; and in some very few instances actual cholera. It has, however, been prevalent chiefly in infants, and has occurred in the form of watery colic. We have seen no case, however, of this disorder in children who were exclusively fed from the breast.

Fever has rather increased in the number of the persons affected, but not in the intensity or danger of the symptoms. Many cases have exhibited disorder of an inflammatory character in the stomach and bowels,—and have been speedily removed by the application of leeches. Rheumatism has also begun to shew itself; and some of the cases have been extremely obstinate.

We have at the present time a case of diabetes under our care. As there were decided symptoms of high arterial action, we have twice bled,—and each time the feelings of the patient have been relieved. We have confined her no farther as regards diet than we do in common dyspeptic cases; and the medicine she has taken has consisted of pilul. aloës comp. every night; pulv. ipecac. comp. gr. v. twice; and liquor potassæ xxxij, three times a day. The saccharine matter of the urine is decidedly less,—and the patient represents herself as much better.

The consequences of measles are still common; and the mortality among children from this cause has been very great.

BIBLIOGRAPHICAL NOTICE.

Dr. James Johnson has nearly ready for publication a fourth edition of his work on the Influence of Tropical Climates, more especially the Climate of India, on European Constitutions; the principal Effects and Diseases thereby induced, their Prevention or Removal, and the means of preserving Health in Hot Climates, rendered obvious to Europeans of every capacity.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. A Comparative View of the more intimate Nature of Fever, &c. By James Black, M.D. London, 1826.

[We shall give an account of this work in our next.]

2. A Lecture on the Uses of Anatomy and Physiology. By James Macartney, M.D., Professor of Anatomy at the University of Dublin, &c. Dublin, 1826.

3. Histoire Anatomique des Inflammations. Par A. N. Gendrin. Tome premier. Paris, 1826.

4. Traité des Maladies du Cerveau et de ses Membranes (*Maladies Mentales*). Par A. L. F. Bayle. Paris, 1826.

THE METEOROLOGICAL JOURNAL,

From the 20th of AUGUST, 1826, to the 19th of SEPTEMBER, 1826.

By Messrs. HARRIS and Co.

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| August. | Moon. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|---------|-------|-------------|----------|------|------|---------|----------|------------------|----------|---------|----------|------------------|---------|----------|
| | | | 9 A. M. | Max. | Min. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 9 P. M. | 10 P. M. |
| 20 | | | 70 85 61 | | | 29 89 | 29 77 | 72 | 50 | E | SW | Fine | Fine | Fine |
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| 24 | | 16, | 68 75 64 | | | 29 57 | 29 62 | 67 | 73 | SW | SW | Fair | Fair | Fair |
| 25 | | | 71 80 62 | | | 29 60 | 29 47 | 71 | 70 | SSW | SSW | — | — | T. & l. |
| 26 | | | 69 73 56 | | | 29 73 | 29 72 | 67 | 65 | SW | SW | — | — | Fine |
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| 28 | | | 69 76 65 | | | 29 84 | 29 79 | 67 | 79 | SSE | SSW | — | — | — |
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| 30 | | | 75 79 63 | | | 29 57 | 29 58 | 62 | 75 | S v. | SW | Fair | — | Clo. |
| 31 | | 10, | 66 73 59 | | | 29 65 | 29 65 | 67 | 74 | W | SSW | Fine | — | Rain |
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| 17 | | | 63 71 57 | | | 29 92 | 29 87 | 74 | 86 | ESE | ESE | Fine | — | — |
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| 19 | | | 63 68 59 | | | 29 81 | 29 84 | 88 | 88 | ESE | E | Fair | Fine | Fine |

The quantity of rain fallen in the month of August was 2.27 inches.

NOTICES TO CORRESPONDENTS.

THE READERS of the MEDICAL REPOSITORY may perceive, from this Number, that it is our intention to extend our monthly limits to at least six whole sheets, or 96 pages, and to print the greater part of the work in a closer and more uniform type than formerly, which will be equal to a still farther extension of the limits of the work.

Several Communications are received, and are under consideration.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

The Index to the preceding Volume will be delivered with the next Number.

*. Communications, and Works for Review, are requested to be addressed (post-paid) to the EDITORS, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 155.

NOVEMBER 1, 1826.

VOL. XXVI.

No. XVII.—NEW SERIES.—VOL. III.

PART I. REVIEW.

I.

RESEARCHES ON DIGESTION.

Recherches Expérimentales, Physiologiques, et Chimiques, sur la Digestion, considérée dans les Quatre Classes d'Animaux Vertébrés. Par FRED. TIEDEMANN et LEOP. GMELIN. Traduites de l'Allemand, par A. J. L. JOURDAN. Première Partie. Paris, 1826. Pp. 417.

THESE researches were undertaken in order to resolve the question proposed by the Académie des Sciences as the subject for the prize in the year 1825, and were submitted to that body for their judgment. MM. Leuret and Lassaigne also presented a paper upon the same subject; but the results of their experiments appear to have contradicted in many respects those of MM. Gmelin and Tiedemann. The society, therefore, declining to examine the question themselves, or to decide to which candidate the prize should be adjudged, states, that none of the papers submitted to their inspection completely satisfied their views; but that two deserved honourable mention, from the number of the experiments and the importance of the results. One of these was the work which we have placed at the head of this article, and which from its nature obliges us almost to confine ourselves to simple analysis. Even in this, however, we cannot enter into the numerous details of the authors; but we must be contented with the general results, and a general account of the mode employed in obtaining them.

The first difficulty that presents itself in examining the phenomena of digestion, is the composition and properties of the various fluids that are concerned in the process, and which

mix with the food in the intestinal canal. Without an accurate knowledge of these fluids, it is impossible to acquire any decided opinion upon the influence they have upon the aliment, or upon the alterations that the last undergoes by mixing with the former. Considering, therefore, the properties of the intestinal and pancreatic fluids as being quite unknown, and those of the saliva, gastric fluid, and bile, as having been very imperfectly studied, the first labour of M. Gmelin and Tiedemann was to analyse accurately all the fluids that are concerned in digestion. It was not enough to analyse the fluids in one animal, because differences might not only exist between the different classes, but between the carnivorous and herbivorous animals of the same class; so that in studying one species alone, there would have been much danger of drawing false conclusions. Some of these fluids could be readily obtained pure, as the saliva and bile—others, as the gastric and pancreatic fluids, were more difficultly acquired, and only by instituting new processes; but the intestinal could by no method be had unmixed with bile or the pancreatic secretion, and they could, therefore, only examine that which was found in the intestinal canal of the animal after a long fast.

The contents of the intestinal canal were submitted to chemical analysis at different periods after taking food, and were tested by various re-agents, subject to distillation, to incineration, to the action of alcohol and acids, upon that portion of the ashes which was not soluble in water, and to a variety of re-agents upon the soluble portion.

The re-agents that were employed, were iodine, chlorine, barytes, sulphate of iron, sulphate of copper, perchloruret of mercury, protonitrate of mercury, in almost saturated solutions; the hydrochloric (the muriatic) acid, the nitric acid, the chloruret of tin, the acetate and subacetate of lead, in a state of moderate concentration; and, lastly, a very diluted solution of the perchloruret of iron.

The ashes arising from the incineration of the different animal fluids were first washed in water, and the solution tested by the tincture of turnsole and acids, in order to distinguish the alkaline carbonates; the alkaline sulphates were sought by muriate of barytes, the muriates by nitrate of silver; the alkaline phosphates by adding muriate of lime to the fluid, dissolving the precipitate in muriatic acid, expelling the carbonic acid by boiling, and then adding some ammonia, which precipitates the calcareous phosphate when it has formed. The nature of the alkali was determined by the form of the crystals. That portion of the ash which was insoluble in water, was dissolved in muriatic acid; a part of

this solution was tested by the sulphocyanuret of potassium, to discover if iron was present; another was precipitated by ammonia; then, after filtering, oxalate of potash was added; and if a precipitate yet formed, it was filtered again, and caustic potash added. The first precipitate was attributed to the phosphate of lime contained in the ash (but with which the phosphate of magnesia and iron might be mixed), the second to the carbonate of lime, and the third to magnesia.

MM. Gmelin and Tiedemann claim for themselves the merit of arriving at the same conclusions with M. Chevreul in his analysis of some animal fluids, without any previous acquaintance with his labours. They confirm also Dr. Prout's discovery of the presence of free muriatic acid in the gastric fluid, which they had found before they had any knowledge of his opinions. This is so far important, that the same results having been obtained by different experimenters, and quite independently of each other, the conclusions at which they have arrived must be considered as established. Suspicion cannot very readily attach to any of these philosophers, of unfairly copying from one another, as the printed documents render it all but impossible that the investigations of the one could have been known to the rest.

Having thus examined all the secretions that have a place in digestion, they proceeded to investigate the changes which the food undergoes in the stomach, and the different parts of the alimentary canal. They first gave simple substances, either from the animal or vegetable kingdom, as liquid and coagulated albumen, gelatine, fibrine, starch, gluten, vegetable mucus, sugar, and fat. These substances were given without any addition, and each of them alone. The investigations were then continued to such compound aliments as are the result of several simple aliments given together, as meat, milk, bread, potatoes, &c.

The animals were fed for some time upon the same diet, and were killed, as we have already stated, at different periods after taking food. The contents of the stomach, of the small and large intestines, were then examined, and the chyle. In some instances the blood and urine were also analysed.

The attention of the experimenters was next directed to the influence of the gastric fluid and bile in digestion; and in order to decide this point, the pancreatic and biliary ducts were tied, it being expected that the changes caused by this obstruction would enable the investigators to distinguish the real effect of these secretions.

And, lastly, the influence of the nervous system was investigated, by dividing the pneumo-gastric nerves either in the neck or in the abdomen. Having thus exposed the plan of

these researches, we proceed to relate their results. The carnivorous animals employed were the cat and dog; the herbivorous were the horse, the sheep, the cow, &c.

Saliva.—After analysing at great length this fluid in man, the dog, and the sheep, we have the following conclusions given:—

‘ 1st. It contains from 1·0 to 2·5 of solid matter in the hundred parts: the saliva of the dog contains most solid matter.

‘ 2d. The solid parts are:

‘ a. Salivary matter; a peculiar animal matter soluble in water, and insoluble in alcohol.

‘ b. Osmazone.

‘ c. Mucus, which is partly dissolved in the fluid by means of an alkaline carbonate, and which renders it stringy.

‘ d. It is possible, also, that a little albumen may exist in this fluid.

‘ e. A little fat has also been discovered in the saliva of man, combined with some phosphorus.

‘ f. The salts soluble in water are:

‘ a. An alkaline acetate, the presence of which can only be discovered by incineration.

‘ β. An alkaline carbonate, which renders the tincture of turnsole blue, and, in the sheep, effervesces with acids. It probably exists in the state of a bicarbonate. The saliva of the sheep contains the most, that of the dog is the next, and human saliva has the least.

‘ γ. An alkaline phosphate, more abundant in man and the sheep than in the dog.

‘ δ. An alkaline sulphate, in very small quantity.

‘ ε. An alkaline chloruret, in great abundance in all three.

‘ ζ. An alkaline sulphocyanuret. Human saliva contains the most, that of the sheep has less, and scarcely any exists in the saliva of the dog.

‘ The alkali in human saliva is almost always potash. In the dog and the sheep, it is soda with a very little potash.

‘ g. The salts insoluble in water are:

‘ a. A considerable portion of phosphate of lime.

‘ β. Less carbonate of lime.

‘ γ. Magnesia has been discovered in small quantity in human saliva, and may exist in the same secretion in the other animals. It has not been sought for.’

The Pancreatic Secretion.—This could be analysed only in the lower animals, and was obtained in the following manner. An incision having been made through the linea alba, the duodenum and head of the pancreas were drawn outwards: the pancreatic duct was exposed in its passage to the intestine (it does not, in the lower animals, always anastomose with the biliary ducts), and having been opened, a small glass

tube was inserted. Fifteen minutes nearly elapsed before the secretion began to flow into the tube; in about six-and-twenty minutes the first drop fell into the phial that was held under the tube; then the escape of the fluid became more rapid, so that a drop issued out every six or seven seconds. When the animal inspired deeply, the secretion flowed much more abundantly,—evidently the effect of pressure upon that part of the pancreas which had been left in the abdomen.

The fluid that escaped at first had a red tinge, probably from a mixture with blood; but what flowed afterwards was perfectly limpid, with a light opaline tint. It was of the consistency of white of egg when mixed with water, and had a weak but very sensible saline taste.

The pancreatic fluid was examined in the dog and sheep, and less accurately in the horse; and the inferences deduced from the investigation are, that this secretion contains:

‘ 1st. 8·72 per cent solid matter in the dog; 4 to 5 per cent in the sheep.

‘ 2d. The solid matter is:

‘ a. Osmazome.

‘ b. A substance reddened by chlorine. It is found in the dog, and not in the sheep.

‘ c. A caseous substance, having probably some analogy with the peculiar animal matter of saliva.

‘ d. Much albumen, constituting about one-half of the dry residue. The pancreatic secretion of the horse contained very much albumen.

‘ e. A very little free acid, probably the acetic. This acidity was manifested in the pancreatic secretion of the three animals.’

It is deserving of notice, that the last portions of the pancreatic fluid that escaped from the dog and sheep were slightly alkaline. Does this depend on any weakening of the nervous influence?

‘ f. The ash arising from the incineration of the dry residue is 8·28 per cent in the dog; and 29·7 per cent in the sheep. The soluble salts of this ash are:

‘ a. An alkaline carbonate, which doubtless exists in the secretion as an acetate. It is very plentiful in the dog, and in small quantity in the sheep.

‘ b. A considerable portion of an alkaline chloruret (muriate) in the dog and the sheep.

‘ c. A small quantity of an alkaline phosphate in the dog, and very much of this salt in the sheep.

‘ d. An alkaline sulphate in the dog and sheep.

‘ The alkali in the pancreatic fluid of these two animals is soda, with very little potash.

'The salts of the ash insoluble in water, are very small quantities of carbonate and phosphate of lime.'

If we compare the composition of the pancreatic secretion with that of the saliva in the dog and sheep, the following differences are observable:—1. The solid residue of the saliva is about one-half that of the pancreatic secretion. 2d. The saliva contains mucus and a peculiar animal substance. If either albumen or caseous matter exist, they are always in very small quantity. The pancreatic secretion, on the contrary, contains much albumen and caseous matter; there is no mucus, and the peculiar animal matter of saliva is scarcely discoverable. 3d. The saliva is neutral, or contains a little alkaline carbonate. The pancreatic fluid contains a free acid. 4th. The saliva of the sheep contains an alkaline sulphocyanuret: there is none of this salt in the secretion of the pancreas.

The other salts are nearly the same in both. It is, therefore, manifest, that those physiologists are mistaken who suppose, that the pancreatic secretion has the same composition with the saliva.

We shall pass over the analysis of the bile, as this secretion has been frequently examined, and MM. Gmelin and Tiedemann have only confirmed former analyses; and we proceed to the experiments upon the state of the digestive organs in animals that have been kept for a considerable time from food.

'*State of the Stomach.*—If the abdomen of a dog or a horse is opened that have been kept for some time without food, the stomach is found quite empty, diminished on every side, and contracted upon itself by the action of its muscular tunic. There is no motion whatever. The laminae of the peritoneum that form the epiploa present extensive surfaces, in consequence of the shrinking of the stomach. The blood-vessels and nerves of the stomach are every where tortuous. The internal mucous membrane exhibits numerous folds.

'*Gastric Fluid.*—In dogs that have fasted, the mucous coat of the stomach is moistened with a fluid nearly as clear as water, slightly turbid, viscid, holding some mucous flocculi suspended. In the stomach of a horse that had not eaten for thirty hours, one hundred and twelve grammes,* and in the stomach of another horse, five hundred grammes of a yellowish pale liquor were found, rather turbid, not very thick, and mixed with some white mucous flocculi.

* The gramme, according to Dr. Duncan's calculation, is 15·4402 English grains, or about three-fourths of a scruple.

'The fluid contained in the stomach of dogs and horses emitted an animal odour, and had a slightly saline taste. It scarcely reddened the tincture of turnsole.'

Having examined the gastric fluid in the horse and dog after fasting, they compelled the same animals to swallow small stones, and in a longer or shorter time afterwards killed them. When killed soon, the stomach was found contracted round these foreign bodies; but if some hours were permitted to elapse before examination, the stones were no longer in the stomach, but in different parts of the alimentary canal below the pylorus, or some stones only remained above. The fluid was much increased by the irritation of these substances, and was very acid. Any irritant has the same effect. Thus in a dog to whom pepper had been given, the fluid was much increased in quantity, and reddened strongly the tincture of turnsole.

MM. Gmelin and Tiedemann refer the origin of the proper gastric fluid to the network of capillary arteries expanded over the mucous tunic of the stomach; and the consistent, tenacious mucus to the mucous glands which exist in great quantities in the stomach. Blasius and Viridet have demonstrated these glands in the dog and other animals. Sir Everard Home has described and represented them as he has seen them in many carnivorous and herbivorous animals. In the horse and ass they are found in the second half of the stomach, where no epidermis exists.

Chemical Composition of the Gastric Juice.—Although this secretion has been examined by many physiologists, as Viridet, Rast, Reaumur, Spallanzani, Scopoli, Stevens, Carminati, Brugnatelli, Vauquelin, &c., no satisfactory result has yet been obtained. Some have maintained that it is acid; others, that it is alkaline; and others again, that it is neither acid nor alkaline. Some of the greatest chemists of the present day have acknowledged their ignorance of its nature. From the experiments of Gmelin and Tiedemann, it appears that the small quantity of fluid that is found in the stomach when irritated is either neutral or very feebly acid; but that when this organ has been irritated, the gastric juice contains a free acid, which reddens the tincture of turnsole. Viridet, Carminati, Brugnatelli, Werner, &c., have also recognised an acid in the gastric fluid of the mammifera. Viridet found an acid fluid commonly in the stomachs of dogs, cats, rabbits, hares, squirrels, hedge-hogs, and pigs.

Carminati had observed that the gastric fluid was neutral in dogs and cats; but that when these animals had eaten, it reddened the tincture of turnsole. He found also the

gastric fluid of the pig acid. Brugnatelli has likewise observed it acid in dogs and cats. Werner has recognised the same quality in these animals, and in that of the rabbit and horse.

That the experiments of Gmelin and Tiedemann reconcile much of the contradiction that has appeared on the composition of the gastric juice, will be manifest, from the account above given; but they seem to believe that an acid always exists in this secretion. One circumstance must, however, as we think, compel us to refer the coagulation of the milk, &c., which always has place in the stomach, to some other power than that of an acid; and this is, that a much greater quantity of acid is required to produce this effect than has ever been found in the stomach. That milk is coagulated, however, is certain, and the fact is confirmed by too many physiologists to admit of the slightest question. Littré, so early as 1711, had found curd in the stomachs of two puppies, which were still suckling. Verratti had observed a similar circumstance both in dogs and cats. Spallanzani, who believed the gastric juice to be neither acid nor alkaline, was convinced, from many experiments, that milk coagulated in the stomach, and that even the preserved internal membrane of the stomach had this property. John Hunter, every Englishman knows, or ought to know, arrived at the same results, and Carminati coagulated milk by means of the gastric juice of a pig. Sir Everard Home maintains that coagulation has place only in the neighbourhood of the pylorus, where the glands are most numerous. No one has confirmed this opinion. The authors of the work under our consideration found coagulation to take place equally in both ends of the stomach, and to be more rapid in the stomach of the dog when they had previously compelled him to swallow pepper.

The nature of the acid existing in the gastric fluid has been hitherto considered uncertain, and it has even been supposed to be an acid *sui generis*. From the investigations now before us, different acids appear to exist free in the gastric fluid, as:

1st. *Hydrochloric (Muriatic) Acid*.—It has been found sometimes by distillation of the fluids of the stomach, particularly in a horse which had been compelled to swallow flints. The stomach of a dog, which had swallowed calcareous stones, contained muriate of lime. Dr. Prout announced the presence of this acid in the fluids of the stomach in the Philosophical Transactions for 1824, but he was deceived in maintaining that no other acid is ever present. Both he and Mr. Children discovered muriatic acid in the fluids vomited by dyspeptic persons.

2dly, *The Acetic Acid*.—This acid has been found both in the

gastric juice of dogs and horses, and in the matter vomited by a young man after fasting, by Chevreul; since, according to Berzelius, the lactic acid is identical with the acetic.

3dly. *Butyric Acid*.—This was twice discovered in their experiments upon horses.

Mucus is found in the gastric fluid, but albumen is rare. The peculiar animal matter of saliva and osmazome also are discoverable.

The salts found in the fluids of the dog's stomach are muriates and alkaline sulphates. The alkali was principally soda. The ash, after incineration, contained a little carbonate and phosphate of lime; sometimes also sulphate and muriate of the same earth.

In the horse, magnesia, iron, and even manganese appeared to be present.

The gall-bladder was always found full in those animals that had fasted for some time before their death; and in the horse, which has no such receptacle, the biliary ducts were distended with their proper fluid. When pepper had been given, however, the gall-bladder was nearly empty. MM. Gmelin and Tiedemann have sought in this circumstance, and the different habits of the horse and carnivorous animals, an explanation of the absence of the gall-bladder in the former. They suppose that the stomach of the horse being rarely empty, there is a constant demand for the bile, and that therefore it is poured into the intestine the moment it is secreted. But carnivorous animals have long intervals between their meals, and consequently a receptacle is required from whence this fluid may be freely obtained, when the digestive process renders it necessary. Cuvier has, however, proposed a similar hypothesis, and considered the gall-bladder as more particularly belonging to carnivorous quadrupeds. This opinion is, nevertheless, not only hypothetical, but even inconsistent with the facts of comparative anatomy; for though those animals who have it not are all vegetable eaters, their number is very small, and may be readily enumerated. It is also certain that many animals possess a gall-bladder who eat as continually as the horse.

The State of the Small Intestine after Fasting.—This was contracted upon itself, and exhibited a very languid peristaltic motion. In dogs, the duodenum contained a fluid of various consistency, whitish, mucous, and coloured with bile. This fluid became thicker as they examined it in the lower parts of the intestine, and assumed a yellowish appearance. Small greenish and brown-coloured flocculi were observed in the superior half of the intestine, which became larger and more consistent in the inferior portion of the tube. They were composed of intestinal and biliary mucus, united with the resinous, fatty, and colouring principles of the bile, and were

evidently the commencement of feculent matter; but, from the animal having fasted, the quantity was small. The real feculent odour, however, was not recognisable in the smaller intestines. With respect to the chemical qualities of the mucus of this part of the alimentary tube, we shall only remark, that it contains a free acid, which the authors conclude to be the acetic.

Cæcum.—True fæces were first observable in this intestine; and its secretions, like those of the stomach, &c., exhibited a free acid. It is suggested by the experimenters, that the presence of an acid in this pouch renders it probable that a new period of digestion has place here. It is an old opinion, but which is scarcely susceptible of confirmation or refutation.

In the colon and rectum the fæces became more manifest and perfect in their formation, as might be supposed; but nothing new is added to our knowledge of this part of digestion.

We have now presented to our readers the result of the investigations entered into by MM. Gmelin and Tiedemann on the state of the intestinal canal, &c., when an animal has fasted for some time; and we proceed to the deductions drawn from additional experiments respecting digestion itself. Here, however, we can enter little into detail; and we must refer those who desire to investigate the grounds of these opinions to the work itself. They begin with

The Action of the Saliva.—During mastication this fluid is freely secreted and mixed with the food, and may be considered:

1st. As having merely a mechanical effect,—softening the food, and facilitating its conversion into an uniform viscid mass.

2d. Aided by the heat of the mouth, it contributes to the solution of aliments, not only by means of the watery part, but of its other solvent principles. Some species of food, as sugar, gelatine, animal and vegetable mucus, are dissolved by the watery parts of the saliva.

That the carbonates of potash and soda, and the chlorides of potassium and sodium, contained in this secretion, have also a solvent power, seems proved by the experiments of Reaumur. Food enclosed in tubes previously moistened with saliva, was more easily digested than when moistened only with water. What effect the sulphocyanuret of potash may have is doubtful. The authors suggest that it may destroy the last remains of vital contractility.

3dly. The saliva contributes to the more easy assimilation of the food.

This opinion is supported by the circumstance of the sali-

vary glands being more numerous in herbivorous than in carnivorous animals. In what manner, however, it assists in this is questionable; and to us it seems even doubtful, whether the saliva has any *peculiar* power of the kind here attributed to it; for every part of the digestive process must have a tendency to assimilate the food taken to the animal body, and the saliva may only participate in this.

4thly. The saliva is the medium by which different alimentary substances become sensible to the gustatory nerves, since the sense of taste is only excitable by food when moistened or partially dissolved.

The food divided and impregnated with saliva passes into the stomach, gradually distending that organ. Here it undergoes a considerable agitation, being confined within the cavity of the stomach by the contraction of the cardiac and pyloric orifices. This contraction is so complete, that if the distended stomach of an animal just killed be removed from the abdomen, not a single particle of food will escape from either opening. This phenomenon, formerly remarked by Haller and many other physiologists, has been again noticed and repeated by MM. Gmelin and Tiedemann.

Sir Everard Home has asserted that the stomach of dogs exhibits a circular contraction in the middle of the organ, dividing it into two cavities, one the cardiac, the other the pyloric cavity. He adds, that the first contains the food in larger masses than the other, *i. e.* the food last taken and the fluid, while that the pyloric end contains the food partially digested. The German experimenters regard this as entirely hypothetical, having never observed, in any of their very numerous experiments, a single instance of such a division. In rabbits we have ourselves, however, frequently noticed a contraction of the kind referred to by Sir E. Home; but we could never detect any difference in the contents of the two parts of the stomach, if the animal was suffered to live for an hour after taking food. If killed sooner, the food near the cardiac orifice was less digested, as might readily be imagined, arising, as it appeared to us, from sufficient time not having elapsed to affect its commixture with the food taken at an earlier period.

The Peristaltic Action of the Stomach is very slow, and sometimes scarcely perceptible. The contractions of the muscular coat are undulatory, and pass backward and forward between the cardiac orifice and the pylorus. In the experiments of MM. Gmelin and Tiedemann, the action appeared most vivid at the inferior end of the stomach. It was

very evidently influenced by the stimulating nature of the aliments. Dogs which had eaten bone, bread, coagulated white of egg, &c., exhibited the strongest muscular contraction of the stomach.

Augmented Secretion of the Gastric Juice.—When the food arrives in the stomach, it exercises an irritating influence upon the discerning apparatus of the organ, and the quantity of the gastric fluid is increased. The actual augmentation is dependent upon the irritating nature of the aliment. Thus it was most abundant in dogs and cats which had eaten bone, cartilage, fibrine, cheese, butter, coagulated white of egg, and less in dogs that were fed upon sweet and easily digestible substances, as gelatine, gum, starch, &c. The acidity of the gastric fluid also exhibited a similar correspondence to the digestibility of the aliment; and this, in all the experiments of these authors, was acid, and reddened the tincture of turnsole.

Solvent Action of the Gastric Juice upon the Food.—This action proceeds more or less rapidly according to the consistence of the food. If it has been thoroughly divided and softened by mastication, the gastric juice renders it quickly fluid; but, on the other hand, should the aliment be in large masses, the external part is first acted upon, and this is sometimes reduced to a perfect pulp, while the interior has not undergone the slightest change. This result corresponds accurately with the opinions of most of those physiologists that have particularly examined the subject. We purpose, in another department of this Journal, to give the detail of the experiments upon the digestibility of different aliments; and in the remaining part of this article we shall give the theory of digestion, as deduced by MM. Gmelin and Tiedemann from their own experiments. In doing this, however, we do not profess to accede to all their conclusions.

Theory of Digestion.—The results, not only of the experiments of these authors, but of all late investigators of the subject, prove unequivocally that the food is by some means or other dissolved in the stomach. By what peculiar agency this solution is effected has hitherto been vainly sought for; and the remark of John Hunter respecting the different ideas of the stomach, 'that it was neither a mill, nor a fermenting vessel, &c., but a stomach,' comprises all the knowledge we have upon the subject. It is this point that the authors of the work under our consideration attempt to decide; and they commence with the fact, that acids are always present in the stomach during digestion. It is, therefore, an im-

portant question, whether to these acids the gastric juice is indebted for its solvent power? Now, in regarding the composition of the gastric fluid, we may observe:

First,—That the water which the gastric fluid contains will dissolve all substances that are soluble in water out of the stomach, as gelatine, &c.: that this solution is accelerated by heat, and that it ought therefore to take place very rapidly in the stomach of mammiferous animals at a temperature of 96 or 97 of Fahrenheit.

Secondly,—The acetic and muriatic acids dissolve the following substances, which are not soluble in water, viz. coagulated albumen, fibrine, cheese, gluten, and gelatine, a substance analogous to gluten, and found both in leguminous plants and grain. In like manner, also, these acids dissolve bone, cartilage, &c.; and this solution likewise is facilitated by heat out of the body,—whence the same effect may be expected to take place from the high temperature of the stomach, and the soluble power of the gastric fluid will be increased.

To the solution effected by the fluids of the stomach a peculiar kind of decomposition seems united. This is well illustrated by the fact, that starch, when rendered fluid in the stomach, loses its property of forming a blue compound with iodine, and is converted into sugar and gum. Something analogous may perhaps occur with respect to other substances; but as yet nothing more has been proved.

Chemists have not yet decided upon the influence that the butyric acid may exercise upon simple aliments. It is, however, fair to conclude, that, as it is found in the stomach of the horse, and the fourth stomach of the ruminantia, it possesses a similar property with the other acids.

Now, though the gastric fluid should possess the power of dissolving the food, in consequence of its chemical composition, the process of digestion is not less in itself a vital action: for that the fluid may be properly secreted, it is necessary that the stomach should be duly nourished; that it should possess the peculiarity of being excited to increased secretion of the gastric fluid by the presence of food; and, lastly, that it should have the power of expelling the dissolved and digested aliment through the pylorus into the duodenum. But all these properties are dependent, in the first instance, upon the circulation and the nervous influence; and whatever, therefore, acts upon these, may be expected to affect, through their medium, the process of digestion. Hence, a deficient nutrition, hæmorrhages, increased secretions of any of the animal fluids, will weaken digestion, because they must both weaken the secreting power of the stomach, and the energy of its muscular coat. Any affection of the

respiratory organs may likewise be expected to injure digestion, because in this case the blood itself, the origin of all the secretions of the body, must be imperfectly formed. The influence of cerebral maladies upon the digestive process is well known; and we can only suppose them to act upon this function through the medium of the nerves. One circumstance still remains, however, unnoticed in this inquiry, and this is the inquiries of Wilson Philip, Brodie, Hastings, &c., respecting the action of the *paria vaga*. That digestion is totally obstructed upon the division of these nerves no rational doubt could exist; but what was the actual link between the division and the destruction of the function had never been explained. Wilson Philip has, indeed, referred it to the diminution of the secretion; but none, either of his own experiments, or those of others, confirmed this opinion. In very many experiments which we have witnessed, there was no evident diminution of the fluids of the stomach, and yet the ingesta had not been acted upon. The late Dr. Gordon was accustomed to notice this circumstance in his lectures; and he considered it as a defect in the chain of induction instituted by Dr. Philip. MM. Gmelin and Tiedemann take it up at this very point; and if their experiments should be confirmed by others, another step is made in our knowledge of this process.

They have determined that the true gastric juice is always acid, and they refer its solvent powers to its acidity. But the blood from which this secretion originates is alkaline, and they are willing therefore to infer that the separation of acid fluid from the blood is an effect of nervous influence. Now, if this opinion be correct, the withdrawing of the nervous power would prevent the formation of an acid, and either the fluid of the stomach would be neutral, or would participate in the alkaline qualities of its source. They proceeded then to submit this hypothesis to the test of experiment.

They exposed the pneumo-gastric nerves in a dog that had fasted for twenty-four hours, and having divided them, removed about the fourth of an inch from each. The action of the heart was immediately accelerated, and respiration for some minutes was very irregular. Ten minutes after the operation the dog attempted to vomit, but ineffectually. Some boiled white of egg was now given him, which he greedily swallowed. In a few minutes he vomited it again, together with a white frothy mucus, which did not redden the tincture of turnsole. An hour and a half after he vomited a frothy viscid fluid, which presented no traces of an acid. He refused some albumen which was offered, but took some milk, which he very soon vomited again: the milk returned was neither

coagulated nor acid. Ten hours after the operation he drank some more milk, but quickly returned it again uncoagulated, and it did not redden the tincture of turnsole. On examining the stomach it was empty, and the sides of the viscus were covered with mucus, which exhibited no acid properties.

To render this experiment perfectly satisfactory it requires both variation and repetition; but it must be confessed, that it gives great probability to the theory of the authors. It adds not a little interest also to the experiments of Dr. Philip with galvanism; and if it will not serve to prove the actual identity of the galvanic and nervous fluids, it shews their analogy in a still more striking manner than the experiments of that gentleman himself.

Theory of the Functions of the Small Intestines.—The acid chyme passes into the duodenum, and the irritation arising from its presence in this intestine produces an increased flow of bile, of the pancreatic fluid, and of the proper secretion of the bowel. With these fluids the chyme is mixed, and the bile, while it imparts at first a yellow colour to the aliment, which, as it passes downwards becomes brown, gives rise also to the following changes:

1st. The muriatic acid of the chyme, which proceeds from the gastric juice, is united with the soda contained in the bile, and which was combined with the carbonic and acetic acids. The disengagement of the carbonic acid is probably the source of the air usually found in the small intestines. If the acetic acid be present alone in the chyme, this will equally unite with the soda, and form an acetate.

2dly. The free acid of the chyme precipitates the mucus of the bile in a coagulated state, together with cholesterine, which contribute in part to the formation of excrement.

The pancreatic secretion is supposed to favour the assimilation of aliment, but principally because the pancreas itself is much larger in herbivorous than in carnivorous animals.

The utility of the proper intestinal secretion is to favour the passage of the aliment downwards during the peristaltic action of the bowels, by rendering the internal surface smooth.

3dly. As a medium between the chyme, the bile, and pancreatic fluid, and by rendering the chyme more fluid to favour its absorption.

This fluid also appears to exercise a solvent action upon the solid remains of the aliment that has been only partially dissolved in the stomach. Accordingly they are observed gradually to diminish as they pass along the bowel, till they entirely disappear.

Lastly,—The aqueous parts of the secretion, together with

the dissolved animal matter, are absorbed by the lymphatic vessels of the small intestines, and the contents of these bowels become more consistent as they approach the cæcum.

Theory of the Function of the Cæcum.—The cæcum is without doubt a reservoir similar to the stomach, in which the last part of digestion is completed. There is secreted in it an acid fluid, which is mingled with the remains of difficultly digested food, and this food continues for some time in the bowel. Here the fæces are formed, soft indeed, but emitting the true feculent odour. Hydrosulphurous acid gas is also freely disengaged in this intestine. From the cæcum the excrement passes onwards through the colon and rectum, gradually acquiring greater firmness, and at length assuming the well-known colour and form of fæces. It appears that even in this bowel absorption of nutriment has place, and that the great as well as the small intestines serve the purposes of nutrition.

Such is the theory of digestion now proposed by MM. Gmelin and Tiedemann. It is evident that the groundwork is not new, and that their experiments serve rather to supply the deficiencies of former investigations, than to lead to a doctrine entirely novel. They have, however, distinguished between the saliva and pancreatic fluid, clearly demonstrating that these secretions materially differ from each other in their composition; they have likewise proved the gastric juice is acid during digestion, and they have rendered it at least probable that this acid does exert some solvent power in the process. With great labour and accuracy, they have traced the gradual change of the aliment into chyle and excrement, and appear to have proved satisfactorily, that, other things being equal, the most divisible food is also the most digestible. In the present part they have only considered the office of the alimentary canal itself, and we look with much interest for the next volume, the translation of which is announced as being in the press. We regret to be obliged to state that there was not when we inquired for it a single copy of the work to be had in London, in the original German. This language certainly ought to be more generally cultivated.

II.

USES OF ANATOMY AND PHYSIOLOGY.

A Lecture on the Uses of Anatomy and Physiology in various Branches of Knowledge, delivered on Monday, the 1st of November, 1824. By JAMES MACARTNEY, M.D., F.R.S., M.R.I.A., Professor of Anatomy and Surgery in the University of Dublin, &c. &c. Dublin, 1826. Pp. 38.

WITH the circumstances which induced Dr. Macartney to publish this lecture, we do not profess to be acquainted,—but it is an able and elegant discourse on a subject of almost universal interest; for the connexion of anatomy and physiology with theology, with natural history, with geology, with natural philosophy, with the fine arts, with the science of morals, and with the art of healing, associates it with all the higher subjects on which the greatest minds have at any time been employed for the best purposes, as well as with the most pleasing studies of persons of the greatest taste and refinement.

The late very eminent Dr. Paley, among many other works which entitle him to the gratitude of his country, conferred a singular service on the public when he gave to the world his work on *Natural Theology*, in which a great deal of very useful knowledge is conveyed in language so plain and forcible as to insure conviction of the great truths which it is brought forward to prove and illustrate. It scarcely detracts from the merits of this eminent divine, that he is sometimes mistaken in points of fact connected with sciences which he had no peculiar opportunities of making himself acquainted with; and it will always be found, that where he has mistaken the contrivances of Nature, the correction of his error leads to some equal proof of that contrivance and adaptation for which he contends. Thus, from an imperfect knowledge of anatomy, he considered the round ligament of the hip-joint to be highly serviceable in giving security to the joint; and he commented upon the circumstance in very lively terms. The security of the joint, however, is owing to a contrivance quite as marked and quite as admirable,—as may be collected from the passage in which Dr. Macartney corrects Paley's mistake.

‘ This joint owes none of its security to the round ligament, but to a much better contrivance. The great mass of muscles which surrounds the bone preserves it in its place so firmly, that in all the common positions and actions of the body it would be almost impossible to dislocate the bone when these muscles are on their guard. The deep socket figure of the joint permits all the necessary motions

with the surfaces always in contact. Even the attraction of these surfaces is capable of keeping the head of the thigh-bone in its socket in defiance of the strength of two men, after all the muscles are removed, and the capsule of the articulation is cut all round, as I have lately ascertained by experiment. Dr. Paley has fallen into the error common with persons unacquainted with physiology—that of supposing the body to be formed on mechanical principles; and in many places he describes its structure as if it were a common piece of machinery. It is, however, only those who study the laws of life, that can estimate and admire as they ought the wonderful contrivance of the animal body. It is evident, therefore, that the more correctly a divine is informed respecting anatomy and physiology, the more effectually will he employ this knowledge as an argument in favour of natural religion. With such views, several persons intending to take orders have regularly studied anatomy in this school.—P. 7.

Of the value of correct knowledge of this kind to men whose office it is to persuade and control individuals of the various ranks of society through which the progress of information is now spreading so rapidly, there can be no question; and it is in every way to be regretted, that of all the branches of science connected with medicine, clergymen, who have the advantage of leisure after having had that of a well-ordered education, should devote themselves most to that which is least useful to them, we mean to the *practice* of medicine. If they were better acquainted with the wonderful structure of the human body, they would learn some caution in interfering with it; and if a greater portion of their retired hours was devoted to the acquisition of science, they would be supplied with such exhaustless stores of argument and captivating illustration, as would retain, or rather recover for them, all that influence over the community which it is so important that they should possess, and the loss of which too many among them are contented supinely to deplore. There is one branch of science which has of late attracted a considerable portion of their attention, we mean that of geology, to which the researches of Professor Buckland have given so much popularity; and the agreement between the recent discoveries of geologists and the earliest records of the formation and deluge of the world, is unquestionably most interesting to the historian, the philosopher, and the Christian. The following observations on this subject deserve a place here:—

‘Geology may be considered a new science, and one which would prove one of the most interesting that could engage the human mind, if sufficient data were ascertained by which could be formed a satisfactory history of the globe we inhabit. That part of geology

which relates to the remains of animals in a fossil state, has received great elucidation from the labours of Baron Cuvier, the celebrated French anatomist. He has been for many years engaged in collecting specimens of fossil bones, and in comparing them with the extensive collection of skeletons under his direction at Paris. He has succeeded in establishing several genera of which no species at present exist on the earth; and many species of which the genera only remain amongst us. Excellent models have been made of skeletons of these animals, as far as they have been obtained; one set of which Baron Cuvier has very liberally sent over here. (*Some of these specimens were shewn.*)

‘There is little doubt that future researches into the strata of the earth, in various parts of the world, must lead to very interesting discoveries. Perhaps, in some unexplored region, fossil remains of the human race may be detected. At present it is the opinion of Cuvier, that there is no genuine specimen of either the human subject or the monkey kind in a fossil state. I have had an opportunity of seeing one of the reputed fossil human skeletons found at Guadeloupe. The rock which enclosed it was evidently of late formation, and the bones were not in a fossil state. (*Here a piece of the rock was exhibited.*) In the anatomical collection at Rotterdam, there is a mineral substance which is shewn as a petrified child. I brought a small fragment of it, and had it analysed by Dr. Barker, when it proved to be gypsum, and was probably shaped by art.’—P. 11.

With the exception of the members of the medical profession, more particular attention is given to anatomy by sculptors and painters than by any other class of persons; and without a competent degree of anatomical knowledge no painter or sculptor could attempt an original work without falling into absurdity. In some of the productions of our own day, there are, it must be confessed, too evident signs of anxiety to display this knowledge. Violent attitudes, forced expression, and brawny muscularity, are the common consequences of this vanity; and the limbs are so laboriously portrayed in many instances, even when they are represented as seen through a covering of some kind or other, as to appear more like dissections than a representation of the living human body. Of all the parts of a sculptor's or a painter's art, the preservation of what is justly called the *harmony* of attitude and expression seems to be the most delicate and difficult. This subject occupies so much of public attention in this country at present, as to make an acquaintance with it essential to every liberally-educated gentleman; and medical men have such facilities for acquiring sound views in these matters, that to be wholly ignorant of them is a kind of reproach. The following passage of Dr. Macartney's lecture evinces knowledge of the subject, and considerable taste:—

‘ The chief object in *sculpture* and *painting* being to represent form, attitudes, and states of action, when living figures are imitated, it is evident that the successful practice of these arts requires a very intimate knowledge of the shape and positions of the different muscles of the body, and of the changes produced in the form of these muscles by the various actions they have to execute. It is generally believed, that the celebrated artists of Greece were well acquainted with this part of anatomy. Indeed, I think many of the ancient statues give full evidence of it. So necessary is the connexion of sculpture and painting with anatomy, that the cultivation of these arts for the decoration of the early Christian churches led to the revival of anatomy after the dark ages. The anatomical sketches of Leonardo da Vinci, which are preserved in the king’s collection of drawings, would not disgrace any anatomist of the present day.

‘ Although all the modern academies of sculpture and painting have a professorship of anatomy, and in many the pupils regularly perform dissections, there are few modern artists who bestow as much labour on the subject of anatomy as it requires. The great defect in the sculpture and painting of the later times is a want of knowledge of the actions of the muscles in the living body. It is no doubt extremely difficult, and can alone result from close observation and long study. The slightest motions of one part of the body, more or less influence the position and the contour of the whole figure. It is very rare indeed to see the attitude faithfully displayed throughout. Some, even of the most celebrated statues, both ancient and modern, are defective in what might be called the harmony of attitude.

‘ In the Farnese Hercules there is not a suitable difference observed between the swelling of those muscles which the attitude of the figure requires to be in action and those at rest. In Canova’s deservedly-admired statue of Venus, the same faults exist in a slight degree. In the fine piece of sculpture of Provost Baldwin’s Death, which is in the Examination Hall of the College, and which was executed, I believe, by an Irish artist, the weeping figure shews a great want of anatomical knowledge. The arm which sustains the head exhibits the flexor muscles of the upper arm in a degree of action which they could not possess, consistently with the resting position of the elbow on the knee. Even the Belvidere Apollo is not exempt from the error of representing several muscles too tamely for the attitude; but it must be admitted, that the artist seemed to have designedly wished to represent his conception of a god more than the real form of a man. Amongst all the ancient statues, there is perhaps none which displays so much of nature, both in the attitude and the expression of the face, as the crouching Venus. Although the features possess the utmost regularity, there is as much countenance as could be produced with all the aid of colouring. The ancient figure of Comedy also possesses the merit of natural expression in a very high degree. The statue of the Gladiator, although the attitude is one very unusual, and difficult to maintain for any length of time, exhibits every muscle in its

proper degree of action. The most perfect anatomy is seen in most of the Elgin Marbles. There is a modern statue of the Honourable Mrs. Damer, executed by herself, and placed in the British Museum, which possesses great merit; which is to be accounted for by the pains she bestowed on the study of anatomy. This lady was instructed by the late Mr. Cruikshank, and produced some sculpture of dissected muscles which shewed very familiar acquaintance with the subject.—P. 14.

‘The want of anatomical knowledge greatly detracts from the general merits of several distinguished painters. It appears in those instances where the limbs are seen, as the artists term it, foreshortened. The ancient painters were singularly happy in producing all possible positions of the parts of the body. Some moderns, however, have failed in accomplishing the same. This part of painting is considered the perspective of the human body; but it is plain that, in designing various attitudes, the success will chiefly depend upon knowing the forms the muscles assume in these various attitudes.

‘The late Mr. Fuseli enjoyed the talent for designing in an eminent degree, and used to boast of his practical knowledge of anatomy; yet in representing difficult and foreshortened attitudes, it appears to me he often failed, which is perhaps to be explained by his yielding too much to an eccentric imagination.’—P. 18.

After reading these extracts, it is almost superfluous to say that the subjects of rhetoric, moral science, education, and legislation, as connected with anatomy and physiology, are treated with great ability, and in a highly interesting manner. Some judicious observations are made concerning the lamentable difficulties in the way of dissection; and as these difficulties, arising out of the foolish prejudices of uneducated persons, are not only felt in the anatomical schools, but obstruct the improvement of medical men after they are engaged in practice, the remarks of Dr. Macartney may perhaps be remembered on some occasions with advantage.

‘It is strange that in this enlightened age, when the importance of anatomy is better understood than at any former period, the prejudice against appropriating the dead and decaying body to the only useful and honourable purpose to which it can be applied, should have shewn itself in Scotland and England to a fanatical excess. It is a fact which I know, that, in consequence of the difficulty of dissection, from this ill-judged zeal, young men are now entering the professions of medicine and surgery without any precise or practical knowledge of the shape and situation of the parts they have to operate on, or of the structure which they have to rectify when diseased. If ever such persons come to operate well, it will be by *learning their anatomy by cutting the living, not the dead*; and as to their knowledge of disease, it must be at best but a *fortunate guess*. I do not know which deserves greater condemnation, the wickedness or the folly of those who would oppose

their own ignorant feelings to the acknowledged interest and good of the whole community, and to the preservation of their own lives and those of their friends, for whose bodies, when no longer capable of feeling pain, they have so much tenderness and respect. I would not, however, argue this point on the score of necessity, or justify dissection as an unavoidable indignity to the dead; for in such cases, who would not endeavour to save themselves and their friends from being made the sacrifice? On the contrary, I say, that if dissection were really an injury or an insult to any one living or dead, it ought to be totally prohibited. But, if we reflect coolly for one moment, we must admit, that employing the body in the communication of useful knowledge, and preserving its parts with care and respect, for the purpose of transmitting this knowledge to posterity, ought to be more agreeable to every person's feelings than casting the body into the earth, or into the water, boiling it in the fire, exposing it to be devoured by beasts and birds of prey, or depositing it in vaults to putrefy and moulder away; or even embalming it, which consists in preserving the external form in a frightful and unnatural state, whilst all the internal organs, which are so much more important during life, are thrown out.—P. 33.

There is much good sense in these observations doubtless; but we scarcely venture to hope that people in general will 'reflect coolly' enough upon it to be satisfied that their breathless bodies are to be employed in the 'communication of useful knowledge,' and that some parts of them at least will be preserved with 'care and respect.' We have extracted rather copiously from so small a publication as the Lecture,—and we conclude, by assuring our readers, that the whole of it will be found worthy of perusal, and full of proofs 'that relations exist between all the branches of human knowledge, proving the magnitude, the simplicity, the diversity, and unity of those laws which govern sentient beings and natural bodies, and which produce the beauty, the excellence, and the harmony of the universe.'

III.

ON THE STATE OF MEDICAL FEELING.

Remarks on a recent Effort to subvert the Charter of the Royal College of Surgeons; with Animadversions on the Evil Tendency of 'The Lancet'; and Observations respectfully addressed to General Practitioners, on the best Means of maintaining their Privileges and Respectability. By WILLIAM COOKE, Member of the Royal College of Surgeons, Secretary to the Hunterian Society, Editor of an Abridgment of 'Morgagni,' &c. London, 1826. 8vo. Pp. 89.

IN the views of the author of this pamphlet, as far as they relate to the progressive improvement of almost every class of

society, we fully agree : in hopes of the medical profession vigilantly keeping pace with them, we are less sanguine than he is. We know and value many individuals in every class of the profession : we acknowledge that many of them are distinguished in every walk of science, and among the foremost in every undertaking of benevolence ; but, taken collectively, and as a profession, we neither think them particularly distinguished as a part of the political body, nor as active and ready supporters of such reforms within their own sphere as depend more on feeling than on expediency. If we survey the general state of the profession at this moment, we see them divided into three distinct parties or classes, we do not mean with any reference to their professional denominations, but solely with respect to opinions more or less diffused through all ranks of them—the *first* perhaps a little too solicitous to preserve useless immunities, and unpopular privileges ; the *second* manifestly struggling to destroy all rank, order, precedence, and authority ; the *third* indifferent to the proceedings of the two first. This indifference of the third class is in the highest degree to be regretted, inasmuch as it gives the second, or that of the levellers, a remarkable advantage over the first. There is something in this state of things strikingly analogous to what has preceded all important revolutions ; and it will be well for the institutions of physic and surgery, if, for want of rational legislators, after the destruction of what is old, the reformers do not fall from one erroneous novelty to another, from what is merely defective to what is oppressively unjust, and even into what we consider to be the most odious of all forms of tyranny, the democratic.

In pointing out these defects in the medical state, we do not deny that its members are making great efforts in the attainment of all kinds of knowledge : the defects of which we speak, are, indeed, not of a nature to be removed by mere attainment : they arise, we think, from a want of proper care concerning the religious and moral education of young men destined to practice ; and, however lightly such an assertion may be regarded by medical men, we beg to assure them that we sincerely believe the fact is open to all eyes but theirs, and that it behoves them to consider how the charge may best become unmerited. The young medical student goes from school at once into the engagements of business, separated from his family, uneducated, unrestrained, he is exposed to all the influences of shallow but imposing philosophy, and to all the seductive arguments of worldly and narrow-minded practitioners. Against these difficulties many have doubtless borne up ; and by strength of understanding and indefatigable

industry, have acquired accomplishments which can grace and honour the liberal profession to which they belong. But to us it is indisputable, that to the peculiar disadvantages we have mentioned, it is to be attributed that of all the votaries of ambition, of all the aspirants for wealth and fame, young medical men are in so many instances apparently least retarded in their efforts by regard for those already engaged in the profession, or by respect for what strict morality dictates. Hence it arises, that in so many parts of the country, surgeons are degraded below their proper place in society, and even physicians are too often chiefly heard of for their illiberal disputes with one another.

To depart so far from the conventional flattery of modern medical criticism, to speak plain truths like these, is certainly not an agreeable duty, or one likely to be performed with general applause; but *it is a duty*, nevertheless, in those who pretend to write for the medical public, and we, at least, shall never have to accuse ourselves of having compromised this duty for the sake of complimenting any man, or any class of men among those who honour our writings with perusal. Even these humble labours will not be useless. The younger part of our readers, whose minds are not yet debased by views of interest, will read and remember what we now say,—and provided we produce any good effect at all, no matter how limited or remote that effect may be, we shall be more satisfied than we could be by the hollow praises which, to the great prejudice of the cause of truth, editors and authors seem so delighted to interchange with one another.

The subject of the work before us, is, as its title indicates, threefold; namely, the late proceedings of which the object was to subvert the charter of the College of Surgeons; the evil tendency of certain writings with which the medical press has for a few years past been afflicted; and the character of general practitioners.

As regards the first of these subjects, we see no advantage that would at present arise from adding to what has been said upon it. We will not believe that the heads of the College of Surgeons are really determined to stand out against the general feeling of society. Whatever faults they may have committed, the sense of them has without any question been materially weakened by the blind and blundering rage displayed on the part of those who professed to represent them to the surgeons of this kingdom. On the unhappy figure made by Mr. Lawrence in the proceedings to which we allude (the folly of which we by no means lay to his charge), no man who has a respect for talents can reflect without some degree of pity. It is always painful to see great abilities

unable, for want of proper regulation, to preserve their possessor from the machinations of cunning men of the meanest attainments and motives. The boisterous applause of a company of very young men, excited too by inflammatory speeches at an evening meeting at a tavern, must indeed have rung wofully in the ears of the eloquent author of the *Lectures on the Natural History of Man*!

‘It is due to Mr. Lawrence to state, that he made some efforts, after the disgraceful proceedings in the College theatre, to secure about him the attendance of respectable and temperate men, for the purpose of counteracting any tendency to violent measures; but the course adopted by the President on opening the business of the meeting was ill adapted to secure unanimity amongst the older members present, on whose influence success greatly depended. However they might at the moment be entertained with sallies of humour,—with the dexterity of hypercriticism,—with severities of sarcasm,—with strenuous attempts at ridicule,—their transient merriment would afford no evidence that they acquiesced in the imputations cast upon the court; or that they approved of all the measures proposed for their own adoption. Satire and sarcasm are dangerous instruments, and are not required for the advancement of science. He who condescends to employ them will seldom obtain by them an accession to his honours, nor elevate himself in the good opinion of the profession; nor will he secure to himself pleasing retrospection. An individual who is actuated by the sole object of advancing the honours and efficiency of surgery, though in the diversity of opinions his plans may not recommend themselves to every practitioner in the art, will secure a general approbation of his noble motive, and will undoubtedly realise extensive support. But if, whilst professing to direct his efforts to the removal of grievances, he descend to personal invective; if his conduct excite a suspicion that some private pique is indulged, his exertions cannot be sanctioned by those who value the estimation of the wisest and best in society.’—P. 15.

On this subject we shall make no further remark. The opinion expressed in this extract we believe to be pretty general; and it is for this reason undoubtedly that no public effort, for which there had been so much laborious and ingenious preparation, was ever so remarkably unsuccessful. There are some men whose very names carry such condemnation with them, that conscientious men, finding themselves by any accident of the same party, begin to suspect themselves mistaken. If Mr. Lawrence believed that the weight of his own acknowledged talents would counterbalance the heavy disadvantage of ill-selected associates, he must now fully understand the extent of his mistake.

Mr. Cooke has treated the second part of his subject with

much temper and judgment, both of which are, we think, conspicuous in the following extract :—

‘ Desirous as I am that we should maintain the character of an enlightened and liberal profession, I beg to invite attention to an influence widely extending amongst us, and mischievous in its tendency. With personal character, or even with baneful principles, which a man may limit within his own circle, I would not meddle, and should gladly abstain from the following observations, were it not for the feeling that the principles and morals of the rising youths in the profession are in danger of being tainted, through a channel which ought to convey the purest streams of information. The periodical publication *The Lancet* made its appearance at the time when the era for small weekly pamphlets commenced, and struck out for itself an unbeaten course. I would not willingly misrepresent its character,—but it appears that hospital reports, often misrepresented—reports of lectures, surreptitiously obtained—combined with a disposition to personal invective and low ribaldry, were its leading features. Much as it may surprise men of education and taste, it is nevertheless true, that, envenomed and polluted as it is, the members of the profession have become rather extensively impregnated with its virus. Its weekly appearance affords opportunity for the early diffusion of medical intelligence. The detail of important cases in hospital practice was adapted to excite lively interest, and gave many practitioners, in and near the metropolis, the opportunity of seeing an extraordinary case before the patient left the hospital. The reports of lectures, taken as delivered by the lecturer, had somewhat of the vivacity of oral communication. These circumstances tend a little to extenuate the inconsiderateness of sanctioning a publication whose principal articles were obtained from prohibited sources. The unlimited and laudable desire of gaining useful information, seduced readers generally from the inquiry, how this information was obtained, and with what it was combined ; but surely these points ought not to have been disregarded. Where is there a man in the profession who would not be despised and scouted, who, by becoming accessory to the injury or mal-appropriation of another’s property, reundered himself a *particeps criminis* ? Are not the mental resources of a professional man as much the natural and acquired rights, by which he advances his interest in the world, as the goods on his shelves are the property of the shopkeeper ? The professional man has perhaps no other means of subsistence. He may not establish his legal claim to this property any more than the physician can adduce the warrant of law to demand his fee ; but there is virtually an equal right in one case as in the other. Mental property is often acquired at the greatest expense. Money, and time, and comfort, and health, have all been sacrificed in the acquisition of knowledge ; and if the principles on which *The Lancet* is conducted are well founded, the moment the man of science opens his mind to make known what he possesses, and enters into a certain compact, by which he is willing to disseminate for the good of

others as well as himself the result of his labours—an individual who has had no participation in the labour, and who has paid no equivalent for the costly information, may violate the well-understood, if not legally-secured engagement, may seize the intelligence and distribute it to the public for his own benefit! In a moral point of view, surely, there is no difference between the guilt of robbing an individual of that property which is elaborated by the powers of his mind, or depriving him of a costly article wrought by the labour of his hands; between violating an honorary agreement, or one in which the parties are bound by stamp, seal, and signature. We cannot, however, wonder that in every order of society an individual should be found whom no obligations bind; but it is a little astounding, in an age when the value of mental culture is somewhat unusually appreciated, and when feelings of moral rectitude appear to be exerting unprecedented influence, that such a character should meet with countenance. Yes, and not merely of men unaccustomed to weigh the motives which ought to guide us in society, but men whom we are habituated to regard as among the brightest ornaments of our profession. Some, perhaps, forgetting the injunction, that we are “not to do evil that good may come,” have taken in this publication on account of the information it contains, and if they have reflected at all on the subject, have satisfied their scruples with the notion that the good resulting from the dissemination of useful knowledge would justify the means of its accomplishment. In the bustle of life, many have, no doubt, taken in the publication without considering its antecedent or ulterior relations; but that men of high character—eminent in their attainments—avowedly hostile to the principles of the publication—who have reprobated the plan on which it is conducted—who feel indignant at its personalities and speculations, and yet regularly take it in—is an inconsistency we did not expect to have met with. We cannot, however, but see the advantage of salutary laws, when even among the more enlightened order of men, of the most civilised country, there is not firm and unyielding principle enough to protect private interests, where the powerful arm of the law does not interpose.—Pp. 55—59.

Have these considerations ever been entertained by the medical men of this country? or have they not? In either case, we really know not what defence can be made for them. We quote some further remarks on the same topic.

‘It behoves those of us who have the charge of pupils, or who have sons rising into the profession, to look a little to the effect of our laxity of principle on them. They are greatly influenced by our example; and if we practically encourage what we verbally and in judgment denounce, we do them an injury by withholding from them a fixed rule of discriminating right from wrong. That which we ourselves read, they will read. The youthful mind is ever ready to seize with avidity what is amusing; and the spirit of personal invective—low witticisms—the epithets of ridicule and abuse—will not fail to arrest their attention. No one will maintain that their

acquiring familiarity with these properties of language, will aid them in the pursuit of science, or excite their relish for the sober study of medical literature, or for patient research, so necessary to success in every complicated object of inquiry. It will not be doubted that profane scurrility, which may present an attractive aspect when associated with effusions of humour, is a species of writing with which it is undesirable our young men should become familiar. But the objections acquire much additional force, when, with aspersions of character, and other evils adverted to, there is an aim to throw discredit on divine revelation, or to jest with, or parody, any parts of the sacred volume, or to treat religion with contemptuous merriment. The parent or master but ill performs his duty who does not endeavour to exclude such publications from the habitual perusal of youths whose studies it is his duty to guide, and whose habits he may probably govern. That "evil communications corrupt good manners," is a trite but useful maxim. Every one admits that it is impossible to associate much with ill-disposed persons, without imbibing somewhat of their spirit, or conforming, in some degree, to their practices. Reading is a species of intercourse; and young persons whose habits have not acquired solidity, will be more disposed to catch at those parts of an author which have an air of mirth, even though of an impious tendency, than at those which contribute to expand the intellect, to temper the feelings, and to correct the judgment. When our youths begin to jest with any fundamental truth; or when they learn to utter coarse and vulgar epithets, perhaps at first quoted playfully from what they read, their moral principles are endangered. The mind, by frequent exposure, soon becomes reconciled to evil which at first left the sting of compunction; and evil habits are not easily overcome.—P. 60—62.

We make no comment upon this passage, but we *solemnly* recommend it to the attention of every man who takes upon himself the serious responsibility of instructing pupils or apprentices. Mr. Cooke has done his honest duty boldly. Sincerely anxious to preserve the character of the general practitioners, he has thought it quite consistent with that object to denounce, without any intemperateness of language, a publication which he justly conceives tends strongly to produce an opposite effect. We trust his understanding is not inferior to his courage, and that the applause he will receive from those whose intentions are pure, and still more the consciousness of having done some good, will make him regardless of the torrent of outrageous abuse and ungentlemanly ridicule which his remarks will in all probability draw upon him.

We wish to speak with a due regard to justice, and without exaggeration, even of the *Lancet*, a publication the name of which we now mention for the first time, although few Numbers of the *REPOSITORY* have, we believe, escaped dishonourable notice in its pages. What part of Dr. Copland's

conduct, during the period of his editorship, excited the rancour of that publication, we really do not know : we have not the least doubt that it was something that did him honour. The generality of the attacks, for we understand those we have seen form but a small portion of the whole, were not of a nature to call for reply, or indeed to excite any degree of resentment. We began our editorial labours with a determination not to notice vulgar abuse, and we have adhered to it. We have a truer respect for the liberty of the press than the conductors of the *Lancet* ; and, conscious of our own good intentions, we do not smart, as they appear to do, under a little remonstrance. It is possible, that, notwithstanding its unhappy propensity to scurrility, the work we speak of may have been the humble instrument of some good : a man who is always railing must sometimes be right by accident, notwithstanding his exertions to be wrong by design : if it had been conducted upon proper principles, and with more regard to gentlemanly feeling and common justice, it might have been eminently serviceable. But, to say the truth, it is difficult to conceive any good object which it is, or ever was, intended to promote. Its animadversions have been so indiscriminate, thrown about with so little regard to any thing but an opportunity of being abusive, that unless they are attributable to personal pique, envy, and disappointment, they are utterly inexplicable. The possession of well-deserved fame seems particularly to exasperate the spleen of this malicious little paper. Retired habits, past merit, are no protection ; age itself is no defence against the activity of its furious, unprovoked, and repeated assaults. Medical men of honourable sentiments, and medical editors, for the most part, have, we imagine, refrained from general notice of this paper, partly because the ostensible conductor is a person with whom, any more than with Cobbett or Hunt, no man can act, even in a good cause, with the smallest confidence. Intemperate, and dealing in the coarsest language, such a writer is an inconvenience to his friends, whilst those who despise him refrain from a controversy in which, as in a controversy with the aforesaid politicians, whether right or wrong, they are sure to be covered with abuse. A man who does not care what he asserts has many advantages in a warfare of words. To adopt a figure well employed during the recent contest for Somersetshire, when you contend with such a person you are exposed to the same inconvenience as a man who fights a chimney-sweeper ; you may come off victorious, but you are sure to be thoroughly blackened in the fray. We repeat, whatever objects may be those of the conductors of the *Lancet*, credulity itself could not give them credit for any

which call for the co-operation of men who have no personal animosities to gratify, and no desire except to do their duty with uprightness and diligence.

These reasons, and not any fear of the revilings of men who, if they did not revile, would never be read, have kept us silent. We have, moreover, observed, and not without satisfaction, that the popularity of this famous production has nearly had its day. Men are often carried away to applaud the first burst of audacious ribaldry; but in a serious profession like ours, the hour of reflection soon has its turn, and if the jester has no very commanding talent, no remarkable degree of information, no power to instruct as well as to amuse, he is soon left to himself. The conductors of the *Lancet*, like their great prototype, (whose talents we do not mean to insult by a comparison with theirs), must descend lower and lower for materials, must make wider excursions in search of scandal and disaffection; personal feelings must be more daringly outraged; all the decencies of life more openly despised; or this waning *Weekly Register* of the degradation of a profession will not long pay for the printing.

There are always numerous political writers without the smallest degree of principle, who, calculating on the vulgar discontent of the ignorant and unprincipled in all circumstances of national affairs, have nothing to do but to abuse and to be paid. There are generally some men in all professions who have their own unknown reasons for being in ill humour with the respectable part of the members of such professions; and now and then the clamours of these more limited maligners become so loud as to attract public attention, and so bold as to be admired in spite of their injustice. A writer of this class, if, unfortunately for the peace of physic and surgery, he belonged to the medical profession, would of course try to gratify the greedy ear of detraction with the proceedings of individuals whose duties are more retired and unostentatious than those of any other profession: he would forget every principle of right in his hatred of particular persons; he would detest one man because he was surgeon to an hospital; another because he was an eminent lecturer; another because he was the editor of a more respectable or more prosperous journal than his own; another because he was an honourable man, and refused to purchase, by degrading familiarity, all the little popularity of a sixpenny pamphlet. He would fearlessly attack every new and undefended name in medical literature; he would rail furiously at the cleverest, and overthrow and trample on the weakest: he would name but to insult; he would notice but to revile; he would quote but to misrepresent; he would calumniate by the sheet, that

his paper might sell. His pages would be open to writers of the lowest imaginable share of talent who had any hatred to gratify, any fancied wrongs to avenge in the dark. The pert apprentice from the country, with his gossip from the wards of the London hospitals; the rejected blockhead still infesting the College of Edinburgh; the Irish vagabond, half surgeon and half rebel; the scavengers of the capitals of Great Britain and Ireland, would all be active in his employ, and all contending for his pay.

As tender of his own spotless reputation as he was cruelly indifferent to the peace of any honest man, the demagogue we have imagined would not only luxuriate in profitable slander, but, like a true bully, shield himself against the common freedoms of controversy, and against retorts produced by his own insufferable insolence, under the strong arm of the law, would receive damages from a man on whom he had exhausted the terms of gross vituperation, and so triumph at once over every manly feeling, and over common sense.

If such were a just character of a publication widely circulated among medical men, what could be said of its readers? and if, among its readers, were to be numbered most of the London practitioners, and many of those in the country, who would dare, in such a lamentable period of medical history, to speak of the high honour and good feeling of medical men as a body united in interests, in pursuits, and in intentions of beneficial tendency to mankind? Would they accept of a defence of their understanding and intelligence at the expense of their principles? or would they vindicate their abilities by an unlimited surrender of all pretensions to character?

No other profession ever did, or, we venture to prophesy, ever *will*, exhibit so shocking an instance of love for the lowest abuse of all the good and great and distinguished in its ranks; no other profession would so long stand in stupid admiration of, or affected delight at, the frantic gambols of so low a performer. Would any lawyer of character take in a publication of such a description in *his* profession? Would any respectable clergyman so debase himself? The question is answered. There is no publication of the kind in any learned profession, if ours do not form a disgraceful exception.

To oppose such disheartening views of a profession which we well know contains far more virtue than vice, and of which the vice is only most conspicuous because the most vicious of its members are, in the present times, the most active, we have great pleasure in quoting one more passage from Mr. Cooke's little work, and we sincerely hope that the

characters therein sketched may daily more and more abound among us.

‘ It has been laid to our charge, that having so continually to contemplate the skill of the Creator in the structure of the human fabric, and witnessing so habitually the devastations of casualty and disease, under all their varied forms—it is surprising that but few comparatively have duly appreciated the blessings of Christianity, or even inquired into the evidences of revelation. I am happy, however, to know, that there are very many amongst us who not only fully and cordially assent to this evidence, but are exemplary in all the duties, personal and relative, private and public, of a religious life. Some of these are men of the most refined taste, whose exertions in the cultivation of science have been the most successful—men capable of realising, in the highest degree, the pleasures of literature, of science, and of social intercourse: but with all their capacity of delight, the exercises of religion, and the generous impulse it imparts to do good, by mitigating the sorrows of others, afford them gratifications far more exquisite than can be enjoyed through any other source.’—P. 63.

In speaking of the *Lancet*, (once more to name that publication), we have considered it not as the work of an individual, but as the production of many hands, most of them of a very contemptible order, with no title but a factious, abusive spirit, and a dislike to their superiors, to be admitted there. Some few instances of the interference of superior workmen there have been, to the advantage, no doubt, of the receipts. Of these writers we do not wish to speak in our present ignorance of them; an ignorance easily accounted for, for who is hardy enough to confess himself a writer in the *Lancet*? who would make such a charge against any individual without the strongest foundation?—But, if *report* speak correctly, if eminent men *have* lent themselves to this work—they will have their reward. During the full vigour of their faculties, they may delay the retribution they owe to the public. Even *now*, however, they must know and *feel* that the mere suspicion of their having been so engaged has led the public seriously to question the soundness of their abilities, and, though not to deny their attainments, very much to doubt their possession of something of far higher value. Let a few more years pass, and the triumph of bad feeling, the mere career of temperament, will be over: the men we speak of will be overtaken and surpassed by those of equal ability and more principle. Falling with every successive year from one degree of degradation to another; shunned by the strictly virtuous; distrusted by all; broken in spirit; withered in fame, they will die unregretted; and if for awhile remembered, will be quoted only as examples

of talents misapplied, and of influence in the first instance justly acquired by ability, and afterwards as justly lost by a departure from rectitude.

IV.

OF FEVER.

A Comparative View of the more intimate Nature of Fever, deduced from Physiological Analysis; and illustrated by Critical Remarks and Practical Observations. By JAMES BLACK, M.D., &c. London, 1826. Pp. 118.

It is with no little pleasure that we at length find an intelligent author bold enough to set the sciolists of the day at defiance; and notwithstanding the general predilection for practical facts, to venture before the public with a theory. In our opinions nothing is more likely to obstruct the progress of medical science than the indiscriminate pursuit of experience—*i. e.* of facts which are supposed to have an immediate value in practice. No one can deny the value of such facts when they occur, nor need we deny that every fact is in itself more or less practical; but we may, and we do deny, the advisableness of multiplying records, till they become too numerous for any one ~~man~~ to peruse, and when, from their multiplicity, they serve rather to confuse than inform the student. The law is not the only science in which cases have become too numerous, or in which books are really and truly great evils; but exactly in proportion to this very circumstance, exactly as it becomes less possible for any single individual to master the whole literature of his profession, so does it become more and more necessary to lay down such general principles as may serve for general guidance. We have heard that Mr. Scarlet, unquestionably one of the greatest lawyers of the day, never looks into cases; and that it is an assertion of his, that he will vainly attempt to attain repute at the bar, who depends not on the correctness of his principles, but his research into precedents. It is in our minds a valuable observation, and equally applicable to medicine as to law. It is not the individual that has seen the greatest number of patients that is the best physician, but he who has so seen them as to deduce principles of future conduct. But the act of the mind by which this is done is that of theorising. We collect, arrange, deduce, and the merest mechanic in the country theorises within his sphere. It is to this very despised process that we must always be indebted for valuable facts; for who but an absolute dolt will collect for the sake of col-

VOL. III. NO. 17.—NEW SERIES. 3 G

lection? There are, indeed, men who will keep most accurate registers of cases (as there are men who having no farther power of mind than memory, will learn to repeat a whole newspaper), and who have no farther object in view; but to what end is such labour either for themselves or others? It is plainly for none.

There is something in the history of mankind not only interesting but puzzling, for there is no department of science which has not undergone revolutions as extraordinary as any of those that have been experienced by the political world. Opinions and doctrines, that have stirred to active warfare the spirits of one age, are looked upon by another as matters scarcely even of interest, almost of contempt. Who cannot instance this in politics? nor is there much difficulty in illustrating it in medicine. Not half a century has passed since the whole island was rent by the deadly feuds of the partisans of Cullen and Brown; and what think we now? The whole matter has become history,—and not only do we not attach ourselves to either theory, but we almost wonder how they could have been the exciting causes of fatal duels. Yet such was the case. It is unfortunately too often a custom among men to reject good and evil together, if they happen to be united, rather than by an attempt at selection to retain the former while they dismiss the latter. This has happened to a certain extent in medical science, and because theories have been productive of some ill, they are now to be rejected altogether. In opposing such a principle as this, Dr. Black has, in our opinion, acted in the most beneficial manner to science; and whatever may be thought of his peculiar doctrine respecting fever, by exciting men to think, its general tendency must be useful.

The greater part of his small volume is occupied in examining the opinions of others; and of this we intend to take little notice. It is, however, true, that such an examination forms a necessary preliminary to any fresh speculation on fever, because only by this plan can past errors be avoided. Before stating the view of Dr. Black himself on the subject, it is necessary to advert to the opinions he has inculcated respecting the capillary circulation, since his theory of fever is a manifest deduction from his former investigations. We shall employ his own language.

‘ To avoid difficulties in physiologising on the capillary system, it is most important to advert to the distinction which I have endeavoured to point out in my short inquiry, that exists between the laws and habitudes of the *capillary plexus* or *net-work* and those of the *capillary leading vessels*. A gentle stimulus throws the former into *erectility* and *tensiveness*, if they have previously been

collapsed, or in a state of depressed circulation, and the latter class of vessels into contraction, or a tension preliminary to it; and the dilatation with active circulation, which some stimuli instantly cause without inducing any previous contraction, is this erectility of the ultimate plexus, which is a condition of highly active vitality.

‘I have also endeavoured to shew that *collapse* and *contraction* are two opposite physiological conditions, though both are attended with a diminished volume of blood in the vessels, as *passive dilatation* and *erectility* are opposed to each other; but as in inflammation the vessels are *all* overloaded with blood, the effect of a stimulus is either to bring the vessels of both the reticular and leading class to their normal or physiological state, or to exhaust still more their muscular power, and so to increase in this latter case the inflammation or the debility of the vessels.’

The inquiry of Dr. Black is in no manner connected with the opinions of Clutterbuck, who refers all fever to inflammation of the brain, nor to Broussais, who calls every febrile affection a gastro enteritis,—but is confined simply to an examination of the nature of the febrile action, whether it be considered as primarily excited by some local injury, or as a disorder of the general system. His first postulate has a reference to a subject that a few years ago was discussed with excessive bitterness, and to which we are in part perhaps indebted for some late proceedings in the profession; this is the *materia vitæ diffusa* of Hunter. The manner in which Dr. Black presses it into his service is fully as open to question, as when formerly employed by Mr. Abernethy. We are ourselves, however, inclined to grant that such a principle does exist.

This principle, which Dr. Black has termed also the muscular power, though united with the corporeal structure, and to a certain degree increasing with the magnitude of the body, may yet be diminished or destroyed without any sensible diminution of the animal fabric. The effects of lightning, poisons, blows, &c., have been frequently referred as illustrations of this fact.

Now the first symptom of fever is a debility of the whole system, which is referred in the theory we are considering, to a diminution in the quantity of this *materia vitæ*. Every part accordingly which is dependent upon this muscular power for ability to perform its functions becomes weakened, *i. e.* all the muscular structure of the body. In this debility the heart and capillary circulation participate, the latter collapsing, and the former imperfectly contracting. But to a weakened part its natural stimulus becomes inordinate; hence, therefore, the heart, even were the usual quantity of blood only returned to it, would be irritated, and its contraction would become more frequent. But from the collapse of the capillary vessels,

and the debility of the muscular structure of the heart, more than the usual quantity of blood is accumulated in its neighbourhood, and when weakest its efforts are most required. These efforts are therefore made, and gradually re-action is established—the cold stage passes away—the pulse become more frequent, and perhaps fuller—the face flushes—the skin burns, &c., and we have the hot stage of fever. It is clear that this explanation, admitting the postulate, suffices for the collapse, and the subsequent increase of pulse, but we have to trace the connexion of these with the increased heat, turgescence of the skin, &c.

Dr. Black observes, that increased heat is always attended with frequency* of the pulse, and, at first, with dryness of the skin. But animal heat is proved by late investigations to be of the nature of a secretion, and consequently to be derived in some part at least from the circulating fluids. Now, though the heart stimulated by the blood acts vigorously, and though this re-action is continued into the leading capillary vessels, it is not at this time participated in by the capillary network, which remains in a state of collapse. In consequence of this, an accumulation of fluids gradually takes place in this set of vessels, but without perspiration, which secretion, according to Dr. Black, depends upon the tensiveness of the capillaries. We have here, then, sufficient data to account for the increase of heat. Heat being a secretion from the blood, and the blood being accumulated in the capillaries, we have the necessary materials for the elaboration of heat. But from the collapsed state of the capillaries, there is no perspiration, consequently the superfluous caloric, which generally is disposed of through this evacuation, remains, and raises very considerably the manifest temperature of the body. Supposing, however, that we refer merely to the chemical phenomena exhibited, it would seem that we might readily account for the increased heat. For

‘ According to Thénard, the average quantity of perspirable matter secreted from the skin in a minute is equal to eighteen grains troy weight; all of which is thrown off in a state of insensible vapour, besides a very appreciable quantity of carbon, in the state of carbonic acid. By these secretions, the body is chiefly preserved in the medium temperature of health; and by considering only the chemical effects which the evolution of so much matter in a state of vapour must have in extracting the caloric of the body, we can see

* We apprehend that this observation is not correct. We have not Duncan's Clinical Reports by us; but if we recollect rightly, there are some striking instances of the contrary recorded; i. e. where increase of heat was attended with a slow pulse: certainly where the heat and pulse bore no proportion to each other.

how the heat of the body must accumulate from even a moderate repression or suspension of this cutaneous process, provided no vicarious evacuation has in the mean time obtained. It is by this function of the animal economy that we withstand a higher temperature if the atmosphere be dry, than when it is loaded with moisture, which last condition represses the transpiration, and so more painfully accumulates the corporeal heat. In increased febrile heat, we have then an increased frequency, if not a velocity in the heart's action, a dilatation of those capillary vessels which are subject to the more direct pressure of the blood, an atonic condition of the minute capillary plexus and transpiring tubes, and an accumulation and repression of the gaseous products of the blood, by which in health the superfluous caloric is extricated from the system. The physiological consequence of such a condition is, that the heat gradually accumulates (if no vicarious discharge takes place) in a ratio with the times; the forces of the circulation, which is also expanding with the degrees of the increasing heat, until the collapsed exhalents yield to, or are excited by the distending momentum of the heated blood; when sweat, partially or universally ensues, which more or less perfectly carries off the accumulated caloric of the body.

If the reasoning be allowed thus far, there is small difficulty in accounting for the other phenomena of fever. The flushing and turgescence of the surface, the dry skin, and thirst, are all referable to capillary dilatation, or capillary collapse, to which last also costiveness, and paucity of urine, may be assigned. Local congestions likewise are readily explicable by this hypothesis; for, supposing the capillary plexus to be collapsed while the preceding series of vessels are in vehement action, a passive dilatation will gradually take place in the former, which, unless the balance between the contents of the vessels and their power be restored, may lay the foundation for organic change. Thus in the course of local disease, the first phenomenon will be simple congestion, to which may succeed local inflammation and its consequences, originating from such congestion, and not, as supposed by many, giving rise to it. Again, the affection of the sensorium may plainly be assigned to a similar cause, acting upon the corporeal organs of sensation through the medium of their blood vessels, and from a similar source the irritability of the stomach may be derived. But it is unnecessary to enumerate every phenomenon of fever; for, as Dr. Black has well observed, 'fever being once constituted, it has never been found so difficult to assign secondary and posterior phenomena to their respective links in the chain of causation, as it is to ascertain the nature of the *prima mobilia* of the febrile movement itself.'

It is very evident, that by this theory we can very easily explain also the phenomena of symptomatic fever, since we

have but to suppose that the local exciting cause acts by diminishing or oppressing the *materia vitæ* or muscular power, and then all the other symptoms follow as matters of course.

Dr. Black has occupied some space in discussing the difference between irritation and inflammation, in which, however, we have no intention of following him, as it does not appear to us more than a dispute about words.

A very material circumstance to be inquired into respecting every theory, is its probable influence upon practice, and how far its deduction appears consonant with experience. Dr. Black has examined this part of the subject with reference to the effects of purgatives, bleeding, mercury, and opium, and has certainly shewn that their known effects are perfectly accordant with the theoretical deductions from experience. It is only, however, into his inquiry respecting blood-letting that we purpose accompanying him, as this is far the most important remedy that medicine possesses.

The great principle must be to restore the balance between the power of the capillary plexus and their contents; and this may be done in one of two ways, either by raising the tone of the parietes of the vessels, or by reducing the quantity of the contained fluids. Either of these plans may be required, or even both in the same person; and yet by a mistake the most serious mischief may ensue. Should the action of the heart be powerful, and the leading capillaries participate in it, the immediate effect will be the dilatation of the capillary plexus; and this dilatation will go on increasing, so long as the expansive power of the vessels will permit. Now here very evidently the first indication is to reduce the quantity of blood in the system, by which means the irritability of the heart will be allayed, less fluid will be transmitted to the leading capillaries, and consequently to the capillary plexus. These, relieved from the previous pressure, will by degrees regain their tone, and the balance of the circulation will be restored. On the contrary, however, the heart may act languidly, the general strength may be much reduced, and from a participation in the general debility of the muscular system, the capillary plexus may be over-loaded. Now this appears to be the state, and is frequently observed in the last stages of typhus fever, when stimulants are often serviceable, and which remedies yet require great attention, lest by re-establishing a vehement re-action, the dilatation of the capillaries should be produced by an opposite state of the general circulation. The local pains, also, which so commonly attend upon typhus fever, and which seize upon different organs alternately, have probably this state of vessels for their cause, and yet are not remediable by very active measures. When,

indeed, there is a tendency to such great debility as will justify the administration of stimulants, general blood-letting can very rarely be admissible, and even local detractions of blood require great caution. In such case, we believe cold to be both the safest and most efficacious remedy, where it can be applied. We cannot better conclude this subject than with the practical inference of Dr. Black himself on the general treatment of fever.

‘ In thus viewing a case of fever of the most reactive appearances, we shall not treat it as if we had nothing to do but with a *hyper-tonicity* of life, and a superabundance of fluids; on the contrary, we shall see in all this only an excessively fictitious vigour, temporarily displayed, which requires to be moderated and repressed, to preserve the weaker organs from giving way to inflammation or disorganisation. We shall also not consign a case of the lower species of asthenic or nervous fever to the unqualified exhibition of stimuli and tonics; remembering, that we have even here the same relative conditions to combat with; and though the more general and obvious indication may be to support and nourish the muscular power, yet the inertia of the fluids, &c., may occasionally exceed the normal standard, and impede our object; and so a partial reduction of these may be further, or at times remedially necessary.’

With respect to the real value of this inquiry into the intimate nature of fever, we are not inclined to give any positive opinion. Much, as Dr. Black has himself observed, remains to be investigated, before ‘ our therapeutical and prophylactic indications’ can be formed upon unquestionable grounds, and consequently before any theory of fever can be deemed unexposed to refutation; for a single fresh fact may overthrow the principal data upon which a theory may be built. Still, however, so far as our knowledge at present extends, Dr. Black’s hypothesis may be questioned, but can scarcely be refuted; and if his first postulate be granted him, the superstructure must, in our minds, remain uninjured. All we can say now is, that the theory here proposed appears fully competent to explain all the common phenomena of fever, and that a link is supplied which was wanting in the hypothesis of Cullen. It has also the merit of placing blood-letting in such a point of view as may prevent any rational mind from abusing or neglecting it.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH
OBSERVATIONS.SECTION I.—ABSTRACTS OF PRACTICAL FACTS, BRITISH
AND FOREIGN, WITH REMARKS.

- I. *Account of a Case in which an Ovarium was successfully Extirpated: in a Letter to a Gentleman in Philadelphia.* By ALBAN G. SMITH, M.D., of Danville, Kentucky. *From the North American Med. and Surg. Journal, Jan. 1826.*

‘DEAR SIR,—When I wrote to you last, I promised, so soon as my professional duties would admit, to send you some account of a case of a diseased and dropsical ovary, which I will now copy for you from my note-book.

‘May 15th, 1823.—I was requested by a gentleman in this neighbourhood to visit a negro woman, who, he said, had a tumour in her abdomen, of two years’ standing, which continued to grow, notwithstanding the efforts of various practitioners.

‘16th.—Visited her, and found that she had a large tumour, which seemed to fill her whole abdomen, but was somewhat more elevated on the right side. Upon examination per vaginam, the uterus appeared to be in its natural position. She complained of bearing-down pains whenever she was in an erect posture; and these were always worse during her menstrual periods. She was about thirty years of age, and had borne two children. Her general health was tolerably good. Seeing, however, that death must inevitably ensue if the tumour continued to increase in size, I informed her that the only means of relief was by extirpation of the tumour; to which she readily consented.

‘After putting her upon low diet, and giving aperients and alteratives for a few days, I performed the operation on the 24th. I commenced by making an incision from the umbilicus to within an inch of the pubis. After cutting down carefully to the peritoneum, I raised it with the tenaculum, and made an incision into it sufficiently large to introduce my finger, and then enlarging it sufficiently to introduce two fingers, I finished the incision by cutting between them. The tumour shewed itself immediately, with its peritoneal covering. Finding that it could not be removed through the incision while of the present size, and being unwilling to extend the latter higher up, and believing too that the tumour contained a fluid, though deeply seated, I made a large opening into it with the scalpel, and evacuated several pints of watery matter; when it so collapsed, that I was enabled, though not without assistance and difficulty, to get it out of the abdomen. I now found, that the

attachment to the right side of the uterus was not larger than the usual breadth of the broad ligament. The tumour appeared to be an enlargement of the whole ovary, as the Fallopian tube, with its fimbriated edge, was stretched over it. I then surrounded the attachment, including the Fallopian tube, with a strong ligature of white silk, drew it very tight, and tied it,—suffering both ends to remain long enough to extend several inches out of the incision. The tumour was then separated at least three quarters of an inch from the ligature. I then turned her over on the abdomen (at the same time keeping in the intestines with a warm cloth) to allow all the blood to escape from the cavity; and turning her on her back again, I took five threaded needles, and closed the external incision by the interrupted suture, taking great care to include the peritoneum in the stitches. I left the end of the ligature, which included the attachment of the tumour, lying out of the lower end of the incision, and secured it by a piece of adhesive plaster; when, after laying on some long pieces of adhesive plaster across the abdomen, and applying a light bandage, I placed her in bed, and gave her seventy-five drops of tinctura opii.

‘ She soon made some efforts to vomit; I then gave fifty drops more laudanum, and in half an hour after two hundred per anum, which did not seem to allay the irritation of the stomach. I then introduced five grains of gum opii as a suppository; after which she became easy, and slept an hour. In the evening I directed a large decoction of senna, salts, jalap, and aniseed; of which she took a wine-glassful every two hours until morning.

‘ 25th.—This morning she had a free passage,—but had suffered from nausea since midnight. Pulse 80, and appeared easy. On visiting her in the evening, found her vomiting, which, however, was soon allayed by large anodyne injections.

‘ 26th.—She had several passages in the course of this day. In the evening the nausea again returned, which was again relieved by the anodyne injections. She could not take any thing on her stomach, unless when under the influence of opium.

‘ 27th.—She had rested pretty well during the night. Pulse 110, and full: some pain in her abdomen and back. Took eighteen ounces of blood, and gave one ounce of sulphate of magnesia, which operated freely. In the evening the nausea had left her: a considerable quantity of serous fluid was discharged from the wound.

‘ 28th.—Pulse 120; rested tolerably. Took twelve ounces of blood, and gave submur. hydrarg. gr. xv., and sulphat. magnes., ʒss.; applied blisters to each side of the wound. With the assistance of an enema, the cathartic operated in the evening, and she was much better.

‘ 29th.—Pulse 90; pain nearly subsided; catamenia returned, but more profuse than common. Took out the sutures; the wound looked well in the evening. Ordered an enema.

‘ 30th.—Much better; pulse nearly natural.

‘ On the twenty-fifth day I took away the deep ligature, by one thread at a time; since which she has been tolerably well, except

during her menstrual periods; at which time she complains of pain in her loins and abdomen.

‘ Upon making an incision into the tumour, I found it to have a scirrhus appearance; and to contain, interspersed throughout its substance, a considerable quantity of bony matter.

‘ You will perhaps be surprised at the large quantity of opium given to allay the irritation of the stomach; but experience has taught me that small quantities will not answer that intention; and as it is necessary to precede any inflammatory symptoms with a purgative, it could not be kept on the stomach any other way.’

‘ The above paper, which we received through one of our members from the author, we consider a highly interesting one. As this operation is peculiarly American, seldom, if ever, having been performed with success, so far as we know, in Europe, we are bound to consider this as one of a series which have unquestionably done honour to our country. To enable the reader to judge of the degree of importance of these performances, and of the difficulty in which the first operators were placed, we have thought it not amiss to present a sketch, from the books of easier access, of what has been already done in cases of this description.

‘ Boerhaave quotes, from Weir and De Graaf, a case in which a man, who made it his profession to castrate and spay animals, becoming irritated at the disorderly life his daughter led, extirpated her ovaria, and effectually removed her lascivious inclinations without destroying her life. Frankenaw is cited for an instance in which an ovarium was removed by a penetrating wound, and in which the patient recovered. Percival, Pott, and Lassus report cases, where, in one instance, a single ovarium, in the other, those of both sides, were extirpated, by removing them from strangulated hernias. Deneux, in his “*Researches on Hernia of the Ovarium*,” states, also, that he had removed the greater part of one of these viscera, and that the woman recovered.

‘ The operation of extirpating the ovarium for the removal of tumours appears to have been first proposed by Platerus. Several writers, as Diemerbroech, Delaporte, and Miraud, have treated of the subject; and though there appears to have been some difference of opinion, that of Diemerbroech and Sabatier appears to have prevailed, and to be generally received; viz. that it is altogether impracticable. The objections of the first of these writers have, however, less weight than those of the latter. Diemerbroech alleges, as objections, the danger of opening the cavity of the abdomen, and the fear of a hæmorrhage difficult or impossible to control, from the spermatic arteries. These must have been overcome in each of the instances above enumerated. Those mentioned by Sabatier are the frequency of adhesions—the enlargement of the vessels of the tumid ovarium—the difficulty or impossibility of ascertaining, positively, that the disease is really in the ovarium—the frequency with which both ovaria are affected—the fact, that surgeons are seldom applied to until the disease has made considerable progress, and frequently become liable to these difficulties, &c.

Notwithstanding these objections, an instance is cited by M. Valentin, from the practice of M. Lafize, a skilful surgeon at Nantes, in which he was necessitated (I know not how) to open the abdominal cavity, in the cure of an abscess in the side. He was then induced to remove a tumour found in that cavity, covered with skin, and bearing many long hairs, and a number of teeth, among which were several molars. These bodies are, as is well known, most usually found in the ovaries; from which, therefore, the presumption is, that M. Lafize separated the one in question; although it appears, from the observations of Ruysch and Baillie, that they are sometimes found elsewhere. The writer of this was shewn, several years since, by a member of Congress, a mass of this nature, having no distinct skin, but containing a number of hairs, and of incisor teeth irregularly dispersed, which had been separated from a larger one contained in the rectum of a girl, from which the one he saw hung pendulous. We do not mention names, because the physician who separated it, with whom we have not the advantage of a personal acquaintance, may wish to publish this very curious case. There has come to our knowledge a rumour of an instance, which we believe was never published, in which a man in New Jersey extracted one of the ovaria, in a quarrel, from his own wife. We have hopes of being able to present our readers with the particulars in a future Number of the Journal.

The first instances, of which we are aware, in which this operation was performed by a surgeon for the removal of a diseased ovarium, are a memorial of the courage of Dr. Ephraim M'Dowell, of Danville, in Kentucky. His first case was in December 1809. The female here was affected with labour pains, and her case was taken by two physicians for pregnancy. On examination, however, per vaginam, Dr. M'Dowell found nothing in the uterus; and concluded, from consideration, that it was an enlarged ovarium. The incision was made parallel with the rectus abdominis, at the distance of about three inches, and was nine inches long. The tumour was at first too large for extraction. A ligature was put round the Fallopian tube, an incision made in the tumour, and about fifteen pounds of a "dirty, gelatinous-looking" substance, extracted. After this, the Fallopian tube was cut, and the ovarium extracted, weighing seven pounds and a half. The intestines rushed out of the first opening, and remained out of the abdomen until the tumour was removed. The woman was then laid on her face to allow the escape of the effused fluids, and the wound afterwards closed with the interrupted suture and adhesive plaster. The ligature of the tube was brought out of the lower end of the wound. In five days after this dreadful operation, the woman was found "engaged in making up her bed;" and in twenty-five days she returned home, a distance of sixty miles, in good health.

In the next case, the tumour was immovably fixed, and was found adhering to the fundus uteri, and to the bladder. Having opened the abdomen, however, Dr. M'Dowell made a small incision into the tumour, and removed a large amount of gelatinous matter

and blood. He then closed the external wound, and the woman apparently recovered. It is stated, however, in a subsequent communication by the same author, that the swelling gradually returned; and six years afterwards became as large as at the period when he operated on her. This patient, a negro woman, was sufficiently relieved, during the interval, to fulfil her usual avocations.

' In the third case, the tumour "adhered to the left side." Dr. M'Dowell cut from an inch below the umbilicus to within an inch of the pubis, and then enlarged the opening to the right of the umbilicus, and for two inches above it. He placed a ligature on the tube, as in the first case, and "turned out" an ovary, which weighed six pounds. No mention is made of the manner in which the adhesions to the left side were overcome. The wound was closed as before. This patient (who was also a negress) recovered in two weeks, excepting the removal of the ligature, which was not effected till after the lapse of five weeks.

' In April 1817, Dr. M'Dowell removed from another negro woman a tumour of the ovary, weighing five pounds. The incision was made "near the linea alba." The ligature slipped from the Fallopian tube after its division, this organ being short and spongy; the patient in consequence lost a great amount of blood. Ligatures were then applied to several of the arteries, individually; but this also failed, as some of them cut through. With much difficulty, a large ligature was put round the whole stump of the tube at several places. This at last effected the purpose; and with precautions similar to those in the first case mentioned above, the wound was closed. The patient recovered of the operation, but remained in ill health, her complaints appearing to be hysterical.

' In April 1818, the same practitioner saw another negro woman, whom he tapped four times, removing at each time a large portion of a gelatinous fluid. He found a firm substance, of considerable size, with the probe which he introduced to break down the gelatinous masses which presented themselves in the discharge. Finding no marks of pregnancy per vaginam, he concluded it to be an enlarged ovary. He operated by an incision on the left side. The tumour adhered by long and slender attachments to several of the adjacent parts. These adhesions he secured by ligatures, as several of them bled. After a process similar to those described above, the wound was closed. She died, however, on the third day, having been affected with violent pain in the abdomen, and obstinate vomiting. The peritoneum was found violently and extensively inflamed.

' Hair and a bone were found in this tumour, as well as a large round perforation, of the size of a musket ball, opening into the cavity of the abdomen.

' These curious cases are described in the *Eclectic Repository*, vol. vii. p. 248, and vol. ix. p. 546. It is certainly much to be lamented, that the accounts there given of so important an operation were not more copious.

In July 1821, Dr. Nathan Smith, Professor of Physic and Surgery in Yale College, extirpated an ovary from a lady of Vermont. It had been observed several years before, when about the size of a goose egg. It burst into the abdomen twice during pregnancy, and once from a fall. At the time of the operation it exhibited a large tumour in the right side of the abdomen, and was both movable, and capable of internal fluctuation.

The tumour was pushed up into the middle of the abdomen, and an incision, of about three inches long, made in the linea alba, from about an inch below the umbilicus. The peritoneum was not opened till the blood had ceased to flow from the first incision. The tumour was exposed and tapped, and a canula introduced. Eight pints of a dark, ropy fluid were removed. The sac was then drawn out, and separated with the knife from the omentum, to which it adhered. Two arteries in the omentum were tied with *leather ligatures*. The ovarian ligament was then divided, two arteries secured as before, and the ligament returned. The adhesion to the parietes of the abdomen was separated by a touch of the knife, and the use of the fingers. The sac was supposed to weigh between two and four ounces. The incision was then closed with adhesive plaster and a bandage.

No unfavourable symptoms occurred. In three weeks the patient was able to sit up and walk; and she afterwards recovered.

In the current year (1825), Mr. Lizars, author of the "Anatomical Plates," has published in Edinburgh a small folio, illustrated with splendid coloured plates, entitled "Observations on Extraction of Diseased Ovaries." He enumerates four instances of attempts at this operation, one of which had been published previously. In this instance the abdomen was opened, but no tumour found,—affording a striking instance of the uncertainty of the judgment of a consultation of several eminent physicians in this obscure and difficult affection. The woman recovered in a short time, after experiencing some trouble from vomiting. In a second case, one ovary was successfully removed, and the woman recovered,—leaving, however, the other ovary deceased, and enlarged to about one-fourth of the size of the one removed. This appears to have been in consequence of adhesions, and the length of the operation. In the third case, the tumour was entirely removed,—but the patient died of peritonitis in fifty-six hours. The fourth patient presented, on opening the abdomen, a great collection of blood-vessels in the omentum running into the tumour, and so numerous and large, that Mr. Lizars was unwilling to proceed with the operation. The woman, at the last accounts, was apparently recovering. We quote this from the Edinburgh Medical and Surgical Journal for June 1825.

Such is the history of an operation; of the opinions of which now entertained by some in England, we can judge in part from the following fact. In a Number of Johnson's Medico-Chirurgical Review, in an article on the late work of Dr. Blundell, which distin-

guished physiologist had been urging on his countrymen an imitation of the bold and successful men who originated this practice, the editor or reviewer makes the following remarks: "We entirely disbelieve that it has ever been performed with success; nor do we think it ever will."—*B. H. Coates.*

We have already noticed Dr. Smith's case; but as the subject has excited considerable interest lately, we have now inserted it at length, with the greater part of the remarks of the editor of the *North American Medical and Surgical Journal*. We cannot certainly, in the face of such evidence, unite in the opinion of the *Medico-Chirurgical Review*. There seems to us indeed something exceedingly unfair in thus making our own notions of possibility the limits of the powers of art.—*EDITORS.*

II. *Functions of the Spleen.*

THE following facts prove that there is an intimate connexion between the spleen and the lymphatic system:—

1. The spleen is only found in vertebrated animals, that is to say, where the lymphatic system first becomes discoverable. Its development keeps pace with that of this system, inasmuch that mammiferous animals, in which the lymphatic system is most strongly developed, have also the largest spleen.

2. It is distinguished by an extraordinary abundance of lymphatics. All anatomists who have paid particular attention to the lymphatic system, Ruysch, Mascagni, Cruikshank, Hewson, &c., are agreed on this point; so that Home, Tiedemann, and Gmelin, are justified in asserting that in no organ are the lymphatics so large and so numerous.

3. With respect to the structure of the spleen, it has a great analogy with that of the lymphatic glands, being composed of lymphatic vessels, arteries, and veins, and has no excretory duct. Ruysch and Hewson have ranged it in the same class.

4. The opinion acquires some weight by the relation of these parts in the tortoise, in which, according to M. Tiedemann's researches, all the lymphatics of the intestinal canal meet in the spleen, where they become interlaced with the arteries and veins, and then pass out, in the form of large trunks, to go to the thoracic duct: in these animals the spleen is manifestly a lymphatic ganglion.

Hewson, Tiedemann, and Gmelin, have observed that in living animals the lymphatics of the spleen are filled with a reddish fluid, which easily concretes, differing not only from chyle, but from the lymph contained in any lymphatics examined by them. This phenomenon is remarkable, and will probably throw light on the function of the organ. From whence does this fluid come? It is doubtless secreted by the spleen. The spleen receives an artery, which, if it is considered as simply a nutrient artery, is disproportioned to its size; an artery larger than the coronary artery of the stomach, or than the hepatic, and only comparable to the renal,

which is destined to a particular organ remarkable for the activity of its secreting faculty. The structure, therefore, of the spleen supports the idea of its being an organ of secretion; and the probability of the red fluid contained in the splenic lymphatics being the production of the arteries of the spleen, is increased by the fact, that fluids injected into the splenic artery readily pass into the lymphatic vessels; so that it might be conceived that the secretion was made immediately by the extremities of the arteries into the lymphatics, or through the medium of the cells, which many anatomists have observed in the spleen, and which are filled, particularly during digestion, with a fluid.

‘ But to what purpose does this secretion of the spleen serve ?

‘ Reuss, Emmert, Vauquelin, Brande, Marcet, and others, have remarked, that chyle taken from the thoracic duct has a reddish colour,—and when exposed to air coagulates, and is divided into serum and coagulum. Reuss, Emmert, Tiedemann, and Gmelin, who have examined chyle before its passage into any of the mesenteric glands, found it to be white, and that it did not coagulate when exposed to air, or at least coagulated very imperfectly; but that by degrees, as it passed through the mesenteric glands, it became redder and more coagulable; and that these qualities reached their highest degree after its mixture with the red and very coagulable fluid of the lymph. The function of the mesenteric glands and of the spleen, appears, then, to be that of converting the chyle into blood (*de sanguifier le chyle*).

‘ The development of the spleen also favours this hypothesis. It is very small in the fœtus, in which no chyle is formed; and it diminishes in old people in the same proportion as the mesenteric glands. The experiments of Tiedemann and Gmelin on the extirpation of the spleen almost reduce the hypothesis to certainty: the animal survived the operation, and nothing particular was remarked in it, except a slight emaciation. When killed after its complete recovery, the mesenteric glands, particularly those of the lumbar region and the pelvis, had greatly increased in size,—a circumstance which has been remarked in many other experiments: the thoracic duct contained a clear, whitish, thin fluid, that, when poured into a vessel, deposited a very small coagulum, which, after a considerable time, acquired a feeble, reddish hue. In their numerous analyses of chyle, they never met with so small a coagulum.

‘ The results of these investigations hardly leave a doubt that we are now in the path of discovery of the functions of this enigmatical organ. The first trace of this opinion is found in the writings of Ruysch and Hewson; it was afterwards sustained in a dissertation *De Usu Lienis*, by Francis Salani (Pavia, 1812); but it was reserved for Home, Tiedemann, and Gmelin, to supply evidence of it.’—(*From a Paper, by Dr. Lund, in the Journal Complémentaire, entitled a View of the Physiological Results of Living Dissections in Modern Times.*)

III. *Case of Cyanosis (Cyania); with Dissection.*

E. N., aged six months, reported to have had good health until the fourth month; but his complexion had always been pale and sickly. From that time nutrition seemed to be impaired; he was frequently restless, and breathed with slight difficulty. When medical aid was summoned, his complexion was pale or bluish; the conjunctivæ and lining of the mouth were of a deep red; the lips, ears, and nails, of a blue colour; the hands and lower extremities, of a reddish blue; the colour of the whole skin was unnatural, being a gray or pearl colour, and the surface was very cool to the touch; the respiration was for the most part regular, but sometimes a little quickened, and then extremely slow and deep, at which times the child's face had an expression of suffering; the pulse was sometimes small and frequent, and sometimes full, or very slow, or intermitting. When the child cried, a tremulous motion of the heart was perceived, the lips became of a deeper blue, and the face almost hippocratic. The most constant symptoms were coldness of the skin, and a blue colour of the parts above noticed; and this state lasted till the child was eight months old, the evacuations continuing natural, and emaciation not taking place. About that time the child was attacked with a short cough; the respiration became oppressed and wheezing, and sometimes deep and slow; the pulse more intermitting; the child cried incessantly for three days, and died in convulsions.

Examination after Death.—The lips, ears, and nails, of a blue colour; the extremities and posterior surface of the body, of a reddish blue; a bloody fluid flowed from the mouth and nostrils. The lungs were greatly distended, of a reddish blue colour, surcharged with a quantity of highly carbonised blood; the thymus gland was of a palish red colour; the heart large, the ventricles and auricles gorged with blood, as well as the coronary veins, and the venæ cavæ; the right ventricle was considerably larger than the left, its parietes more than twice the usual thickness, and its columnæ carneæ very strong. The foramen ovale was open, its diameter equal to that of a pea, and traversed by slender fibres, crossing one another like threads. At the base of the septum of the heart, exactly under the middle of the aorta, there was a semi-circular fissure, five lines in breadth, and three in depth, having a direction towards the apex of the heart, so that the finger could be passed from the right ventricle into the left, and from both into the aorta, the diameter of which was larger than usual. There was no peculiarity in the origin of the pulmonary artery; but its diameter was also increased. The ductus arteriosus (*conduit arteriel de Botal*) was open, but scarcely half a line in width. The liver was voluminous, filled with dark-coloured, almost black, blood; the spleen presented the same appearance. The stomach contained three ounces of a reddish-black fluid, which was ascertained to be

blood, mixed with some fluid which had been taken before death : the blood had probably been carried into the mouth during a fit of coughing, and swallowed.'—(*Revue Médicale, from Hufeland's Journal.*)

Remarks.—All the appearances described in this case have been met with in other instances, and in cases of which the subjects have lived to the age of puberty. The gorged state of the lungs is probably common in these instances, though not generally considered an important circumstance. In Dr. Marcet's case of a blue girl, inserted in the first volume of the *Edinburgh Medical and Surgical Journal*, there was no unnatural communication between the cavities of the heart ; but the lungs were distended with an unusual quantity of dark-coloured blood, and 'adhered every where to the inner surface of the chest, to the diaphragm, and to the pleura covering the pericardium.'

IV. *Dr. Spurzheim's Letter concerning the Case of Miss Dunlop.*

WE insert a translation of Dr. Spurzheim's letter not only on account of the natural interest of the subject, but because we think it affords a striking example of its being the character of a theory 'to assimilate every thing to itself.' Our meaning will be better understood after a perusal of the letter.

'LETTER FROM DR. SPURZHEIM TO M. DEFERMON.

'The following fact, which is so rare, and so important in its connexions with physiology and philosophy, appears to me to merit a place in the *Bulletin des Sciences Médicales*.

'During my visit to London in the spring, Mr. Wardrop, surgeon-oculist, took me with him to see one of his patients, Miss Dunlop, who had been blind, in consequence of an attack of ophthalmia, from the age of five months. At the age of forty-six, she submitted to an operation for artificial pupil. Mr. Wardrop had at first made an opening in the iris ; and ten days afterwards he removed an opaque substance which presented itself at the opening. From that time Miss Dunlop saw external objects ; but the light of the day was disagreeable to her : she was dazzled by it, and compared the sensation it created to a ringing in her ears. The operation completely succeeded, and no inflammatory symptoms supervened.

'1. I saw the patient on the 3d of March, fifteen days after the operation, and before the necessary precautions had yet admitted the use of the lately acquired sense. *In order to assure myself how far the functions of sight were independent of those of touch*, I proceeded in the following manner:—

'2. We first shewed her large and small objects, and she did not confound one with the other : consequently she perceived size.

'3. Although she could measure distances correctly, she saw surrounding objects, and generally sought them (tried to touch them) further from her than they really were. In consequence of this difficulty of measuring distances, her fear of hurting herself

against obstacles had *increased*; but she liked to see men, horses, and carriages, in the street.

‘ 4. I placed a glass of water on the table in the middle of the room, and begged her to get up and take it. She approached it with *much precaution, stretching out her hand in the direction of the glass*. When she was near it, I removed the glass: she immediately perceived it, and said you take it from me (*vous le reculez*). She consequently perceived motion.

‘ 5. I afterwards offered her several wafers of different colours: she assured us that she received different impressions from them, and that she preferred the colour called yellow to the colours called black, white, green, and red.

‘ 6. As the patient only saw with *one eye*, it is evident that external objects could not appear double to her.

‘ 7. This time she did not seem to us to perceive sufficient light to distinguish *the forms of bodies (pour cette fois elle ne nous parut pas apercevoir assez de lumière, &c.)*; and being afraid of fatiguing her, we finished these our first experiments.

‘ 8. Four days afterwards, we called upon her again, prepared to repeat our experiments and to try new ones. *She perceived distances a little better*: she easily distinguished large from small objects. I profited by this capability to ascertain that she saw objects in their natural position, and not reversed.

‘ 9. I had prepared a black figure, large at one extremity, and pointed at the other. When she had pointed out to us the difference of volume of the two ends, I placed them alternately upwards and downwards, to the right and to the left, and she always told us correctly where the large end was, and where the small end was.

‘ 10. Having begged her to trace on my hand with her finger the forms of round, square, and long, I convinced myself that she knew them. I afterwards shewed her these forms traced in ink on paper, and she recognised them exactly.

‘ 11. We shewed her ribands of different colours. She said that she perceived a difference in them, and that she found those which are called bright yellow and bright red (*jaune-clair et rouge-clair*), and, in general, the semi-colours, the most agreeable or prettiest to the sight.

‘ 12. *These experiments prove, then, incontestably, what M. Gall and myself have always maintained*, that in man, as well as in animals, touch does not rectify the sight, insomuch as it does not teach the existence of objects with reference to space, number, position, volume, form, or movement; but that the sight, like every other sense, produces its functions by itself, and in consequence of its particular apparatus.

‘ Miss Dunlop’s sight gradually became stronger; and after six weeks she was able to return to Glasgow, in Scotland, her native country.’

We have taken the liberty to number the paragraphs, and to print some passages in italics, not for the purpose of altering their

sense, but in order to make detached observations on the several points intelligible.

NOTES.

1. It is to be observed, that Dr. Spurzheim had always maintained opinions at variance with those commonly received by metaphysicians on this subject; and that his experiments were all instituted for the sake of proving what he had pre-conceived.

2. This first experiment, we think, proves nothing. If Miss Dunlop could see at all, she must see that some objects were larger than others. As we proceed, it will be found that she only perceived the *relative* size of objects.

3. The second experiment proves what Dr. Spurzheim would not see: 'she could not measure distances.' Certainly she could not, because she had not tried by touch or by feeling to assist the new sense of sight. She would, we suppose, learn distances by moving her hands and arms to those she could reach, or by cautiously walking to the distant objects. 'Her fear of hurting herself had increased:' this was because she was for a time deprived of her wonted reliance on touch alone, and had not yet learned to apply the knowledge obtained by that sense to the aid of her new sense.

4. The only thing of any importance proved in this experiment is, again, that she did not know the distance of the glass from her, and consequently tried to assist her unpractised sight by the practised sense of touch; she extended her hand, and approached the glass with caution. As for her perceiving motion, this was as necessary a consequence of her seeing at all as was her perception of large objects being bigger than small ones, and does not in fact bear upon the point in question.

5. This experiment also has no reference to the real question. Nobody ever asserted that our acquisition of our knowledge of *colours* was assisted by the touch. We may observe by the way, that there was in this case an immediate *preference* of one colour over another, independent of any possible reference to *utility*. We have always believed, as well from our own recollections and experience, as from what we have observed in others, and particularly in children, in the inherent existence of this preference in our nature with respect to the form, colour, and other qualities of external objects; although we must acknowledge that we find all great authorities opposed to us on this subject.

6. This refers to a purely hypothetical notion of our vision being originally double. There is another equally fanciful notion entertained by some philosophers, that we originally see objects upside down, to which a subsequent experiment refers.

7. Miss Dunlop 'could not distinguish the *forms* of bodies.' This is exactly the point which Spurzheim disputes. It is with respect to form and distance that the sight receives such important aid from the touch: the deception arises from the aptness of the sense of sight to learn,—so that after seeing *and feeling* the shape of objects for a time, their shape comes to be understood at once by

sight alone. Sometimes, however, the conclusion is too hasty, and the imitation of relief passes at first for reality: in this case, if we are led to doubt the correctness of our sight, we appeal at once to the sense of touch.

8. At the *second* visit, 'she perceived distances a little better': she *easily* distinguished large from small objects. We were told that she made the latter distinction readily at the first visit (Note 2): but in measuring distances, we learn she had *improved*. The explanation of these circumstances is, that the distinction of the *relative* size of objects did not demand the aid of touch; but the actual distance of objects could not be correctly ascertained, until, by repeated assistance from the sense of touch in its various modifications, the eye *learned* to judge of this particular.

9. This experiment also proves only that there was a perception of *relative* size and *relative* form.

10. When Miss Dunlop traced the forms herself, she was merely repeating what touch *alone* had taught her. Her recognition of these forms on paper, *when seen for the first time*, would have been by far the most important fact of all that were ascertained, if it had been observed at the first trial of sight: at the time this experiment was made she had evidently already acquired some experience in comparing the objects of touch with those of sight. If, before sight had been exercised, it had been ascertained that Miss Dunlop knew by the touch the difference between a cube and a globe, and if a cube and a globe had been placed before her eyes, and she had at once known, without touching them, which of them had conveyed the globular sensation, and which the sensation of a cube to the touch, the experiment would have been, if not conclusive, certainly very valuable to Dr. Spurzheim. We imagine she would not have known one from the other: each would, in all probability, have appeared to her to be a plain surface of different shades of colour in different parts: she might probably have known that they were also of different form, but nothing more. Her knowledge of the manner in which a globe would affect her sense of touch could not have given her any knowledge of the manner in which it would affect the sense of sight.

11. It is only necessary here to refer to what was observed in Note 5. Nothing further is proved by this experiment.

12. In this paragraph we have surely the most felicitous instance of what is called jumping to a conclusion. An unprejudiced review of the above experiments shews, we think, that, if they prove any thing, it is not what Dr. Spurzheim quotes them to prove, but almost the direct reverse.

We may repeat, that, with respect to the number of external objects, their *relative* volume as regards one another, their *relative* form, and their *movement*, mere vision must suffice for the perception of them; but with respect to the *space* which divides objects, their *position*, their actual *form* and *volume*, even these experiments do not show that the eye suffices to ascertain them until after it has repeatedly borrowed the aid of the sense of touch. If philoso-

phers have yet further limited the sense of sight, they have probably gone too far.

If, instead of labouring to establish a theory, Dr. Spurzheim would condescend to observe the actions of young children, we think he would see them learning to use their senses, and in a particular manner exercising their senses of sight and touch as mutual auxiliaries, catching at distant objects in their experience, and carefully feeling every thing within their reach. He might also, we think, easily satisfy himself that the lower animals, in which the sense of touch is less exquisite, never acquire very accurate ideas of form, and take fright, partly from this cause, at various inanimate objects.

Nor is Spurzheim's apparent analogy, implied in the sentence concerning the independence of sight, 'like the other senses,' to be relied upon. The senses, doubtless, materially assist one another. We hear better when we see the speaker; we taste better when we see than when we do not see what we are eating; we continually call upon one sense to free another sense from perplexity. A man who had never heard, and on whom the sense of hearing should suddenly be conferred, would, doubtless, distinguish loud sounds from low ones, and sharp or shrill sounds from deep; but he would for some time be quite unable to judge of the distance of a person by the sound of the voice: this knowledge would be the result of many comparisons of what was heard with what was seen. If we could suppose an utter want of the sense of touch suddenly cured, we should find this sense productive, at first, of very little information, &c. &c.

On the whole, little more seems proved by this case, according to Dr. Spurzheim's account, than was ascertained in Cheselden's subject, an account of which also, from the pen of a foreigner, we shall append to these remarks. The writer was not the inventor of a new theory, but the reader will perhaps think him somewhat entitled to attention when we say he was no less a person than M. Voltaire.

'In 1729, Mr. Cheselden, one of those famous surgeons who unite manual dexterity with extensive mental acquirements, having conceived the possibility of giving sight to a man who had been born blind, by depressing what they call the cataracts, which he supposed had formed in his eyes almost at the moment of birth, proposed to perform the operation. The blind man did not easily consent to it. He could not very well conceive how his pleasures would be increased by the sense of sight, and, but for the wish to be able to read and write, he would have had no desire to be able to see. However, the operation was performed, and succeeded. The young man, who was about fourteen years of age, saw the light for the first time. His experience confirmed all that Locke and Berkeley had foreseen. He was long before he distinguished sizes, distances, situations, or even figures. An object of the bigness of an inch placed before his eye, and concealing from him the view of a house, seemed to him to be as big as the house. All the

objects which he saw seemed to him at first to be close to his eyes, and to touch them as the objects of touch touch the skin. He could not distinguish what he had by the use of his hands judged to be round from what he had judged to be angular; nor discern with his eyes if what he had felt with his hands to be uppermost or lowermost, were really uppermost or lowermost. He was so far from comprehending the nature of size, that, after having perceived by his sight that his house was larger than his room, he could not understand how sight could convey this idea to him. It was not until after two months of experience that he could perceive that paintings represented solid bodies; and when, after this long groping with a new sense, he had found out that bodies and not surfaces only were represented in pictures, he applied his hand to the paintings, and was astonished not to find the solid bodies of which he began to perceive the representations: he inquired which sense was the deceptive one; the sense of touch, or the sense of sight.'

V. Chemical Notice of a Black Liquid, vomited in a Cancerous Disease of the Stomach. By J. L. LASSAIGNE.

'THE patient who vomited this matter was a woman, fifty-five years of age, and had complained for three years before her admission into La Charité of a weight at her stomach, but unaccompanied with any decided pain. Her digestion was imperfect during this time, and she had occasional vomitings; and when first examined by M. Andral fils, she was very much emaciated. Between the cruciform cartilage and the navel, a hard, tuberculated, and painful tumour was manifest. For the first fifteen days after her admission she vomited all her food, which consisted only of soup and broth. Soon after she was attacked with a vomiting of black matter, which at first took place only every three or four days, and afterwards every day. During the latter stage of the disease, she vomited a pint of this black matter in the twenty-four hours, under which she rapidly succumbed. On opening the stomach, the parietes of the pyloric end were all cancerous, and in the great curvature, to the left of the pylorus, an ulceration existed, of the size of a two-franc piece, through which the finger penetrated into the third curvature of the duodenum; so that by means of a double perforation of the stomach and the duodenum, a communication was established between these two parts of the alimentary canal. Old adhesions prevented effusion into the cavity of the peritoneum. In the whole of the cancerous portion the mucous membrane was swelled and softened, and of a brownish-red colour. The subjacent structure was scirrhus. No vessel could be found to the rupture of which the vomiting of the black matter could be attributed.

'*Chemical Analysis.—Physical Properties.*—This liquid was of a brown chocolate colour, and was rendered turbid by a flocculent matter which it held suspended. Its odour was slightly acid, and separated from the black deposited matter by filtration; it had a reddish-brown colour, like that of the blood a little changed. Its

specific gravity was rather greater than distilled water, and at a temperature of 12° Reaumur, and 763 pressure, 1.007. Its density, therefore, was less than that of serum.

Chemical Properties.—The blue paper of turnsole dipped in the liquid became sensibly reddened in a few minutes. Alcohol, sulphuric, nitric, and muriatic acids produced an abundant precipitate of yellow flocculi. The phosphoric and acetic acids caused no alteration. Liquid ammonia and caustic potash only rendered the colour deeper; with the last, however, there was a sensible disengagement of volatile alkali, demonstrating the presence of an ammoniacal salt. Nitrate of silver and muriate of barytes demonstrated the presence of a muriate and sulphate. Lastly, the solution of chlorine and infusion of nutgalls formed abundant precipitates, as well as the perchloruret of mercury.

In order to discover the nature of the acid, some of the matter was submitted to distillation, and the products examined at intervals by the tincture of turnsole and solution of nitrate of silver. No acid could be discovered, neither muriatic nor any other, and not even in the portions that were last given off. On the contrary, all the products exhibited alkaline properties, and changed the vegetable red to blue. This was owing to free ammonia, for the distilled fluids gave no precipitate either with lime-water or solution of barytes, thus proving the absence of carbonic acid. They precipitated the acetate of lead and the perchloruret of mercury in white flocculi; the protonitrate of mercury gray; the sulphate of copper light blue, and the precipitate was redissolved in an excess of the liquor, manifesting a deeper blue colour. Saturated by some drops of muriatic acid, they formed, by evaporation, a crystallised salt, in delicate white spicula of a sharp taste, which, dissolved in a small quantity of water, formed with the chloruret of platinum an orange-yellow precipitate, and disengaged a powerful odour of ammonia upon the addition of caustic potash.

The ammonia, in the product of distillation could not have proceeded from the decomposition of animal matter, for the temperature was not raised above 105° R. at the end of the process. It appeared probable, however, that a portion of ammonia had been disengaged from a salt of which it formed the base by the action of caloric only, as is observed in evaporating salts composed of certain vegetable acids and ammonia.

When the temperature of this liquid had risen to between 60° and 70° R. the liquid became turbid, and deposited reddish flocculi, which were separated by filtration. These flocculi, after drying, were hard and brittle. Boiling water exerted no action upon them, nor warm alcohol; the latter, however, extracted a small quantity of fatty matter. Their true solvent was solution of caustic potash. Calcined in a platina crucible, they were decomposed as certain azotic substances are, swelling much, and leaving a coal not easily reduced to an ash, and which contained a little phosphate of lime and traces of oxide of iron. This matter had, therefore, all the

characters of coagulated albumen. The residue of the distillation was a brownish-yellow extract, with an odour very similar to that of soup. It reddened the turnsole paper very decidedly, and upon triturating it with a solution of caustic potash in a mortar, a strong ammoniacal odour was evolved. Treated with from eight to ten times its volume of alcohol, at 36° R. some yellow insoluble flocculi were disengaged. The alcohol was dyed of a yellow saffron colour, and it furnished, by evaporation, a yellow extract of an acid saline taste. Left to itself it composed a granulated body that appeared to be formed by the agglomeration of small spherical masses. For the purpose of separating this crystalline matter, the alcoholic extract was diluted with a small quantity of cold water; the matter, on account of its little solubility, sank to the bottom of the water: it exhibited round, white grains, inodorous, tasteless at first, but which, after a short time, was like old cheese. This substance, soluble in a greater quantity of water, reddened the tincture of turnsole; it was not precipitated by lime-water, nor solution of barytes. The nitrate of silver precipitated yellow flocculi, soluble in an excess of nitric acid. Suffered to evaporate spontaneously, it regained its granulated, crystalline form. Heated in a silver spoon, it melted, swelled, and burned, giving forth the odour of burnt horn, and leaving a coal which afforded no ashes from its combustion. This substance, which, without doubt, was an azotic organic acid, (*un acide organique azoté*,) formed a very soluble salt with potash, which crystallised in a yellow granular mass. This salt had a fresh saline taste, and left a warm taste in the mouth, similar to what is experienced after eating old cheese. The characters of this acid induce M. L. to consider it identical with that discovered by Proust, and which he distinguished by the name of caseic acid. As this acid has never yet been found in the healthy animal organization, it must be regarded as a morbid product.

The cold water with which the alcoholic extract had been treated was submitted to evaporation; another granulated mass, like the former, was precipitated, and was separated by again washing it. After these repeated solutions and evaporations an uncrystallisable matter, with a smell of soup, and a sharp saline taste, was obtained. This substance, possessed of more decided acidity than the caseic acid, was dissolved in water, and placed in contact with subcarbonate of lead. During this operation, which was facilitated by the assistance of heat, ammonia was evolved: the liquid, a little discoloured, had now a saccharine taste, slightly styptic, from the solution of some of the oxide of lead which had been saturated by the free acid of the liquid. In order to obtain it pure, the lead was separated by a current of sulphuretted hydrogen gas. The acid obtained by this process was uncrystallisable, inodorous, of a light yellow colour—was decomposed by heat, without affording ammoniacal products, and presented the character of lactic acid, containing a small quantity of the chloruret of sodium and potassium, (muriate of soda and potash).

' The subcarbonate of lead, employed for this experiment, was combined with animal matter, readily recognisable by the smell, when a portion was thrown on the coals. It was separated from the salt by washing it in water and passing a stream of sulphuretted hydrogen gas through the fluid. It appeared from its solubility in alcohol and water to be osmazome, from which it did not differ but by its insipid taste; in fact, it was deprived in the present instance of all the saline substances with which it is generally mixed.

' The remainder of the alcoholic extract, insoluble in alcohol at 36° R., after being washed several times in this fluid, had no sensible taste; it was redissolved in cold water, and afforded precipitates with infusion of galls, solution of chlorine, and subacetate of lead. This solution, evaporated by a gentle heat, did not become jellied, but dried in yellow tasteless plates. This animal matter, which M. Lassaigne has often met with, he considers as holding a middle place between gelatine and mucus.

' *Examination of the Black Sediment separated by Filtration from the Fluid vomited.*—This matter was of a deep brown colour, with an insipid smell, and assumed, upon drying, a vitreous hardness and appearance. Neither boiling water nor alcohol exerted any action upon it. Sulphuric acid, diluted with four parts of water, dissolved this substance at a gentle heat, and took a brownish red colour. This solution, saturated with ammonia, afforded floculi of the same colour, and having the same appearance when dry as the serum of the blood obtained by this process. The action of the muriatic and acetic acids, as well as the action of solutions of carbonate of soda and potash, proved its resemblance to the colouring matter of the blood, altered as this is in melanic tumours (melanosis). Incinerated in a platina crucible, it left a reddish residue, formed of oxide of iron and phosphate of lime, although the iron could not be demonstrated in acid solutions by appropriate re-agents; a circumstance that depends, as has been shewn by Berzelius, upon the state of combination in which this metal exists, with the elements of the colouring matter.

' The experiments above related prove therefore that the black matter vomited by a woman afflicted with cancer of the stomach was composed—

- ' 1. Of a great quantity of water.
- ' 2. Of free lactic acid.
- ' 3. Of lactic acid, combined with ammonia and soda.
- ' 4. Of caseic acid.
- ' 5. Of osmazome.
- ' 6. Of albumen.
- ' 7. Of the following salts, viz. muriates of soda and potash, and phosphate of lime.
- ' 8. Of a black matter analagous to the colouring matter of altered blood, and which imparts its colour to the liquid.

' This analysis appears to confirm the opinion of Breschet, that the black colour of matter vomited in certain diseases is owing

to an alteration in the colouring matter of the blood.—(*Journal de Chimie Médicale, &c. Septembre 1826.*)

VI. Chemical Examination of a Liquid found in the Gall Bladder of a Man who died with a Scirrhus Affection of the Pancreas, and a Jaundice consequent to that Disease. By A. CHEVALIER.

‘ THE patient in whose gall bladder this colourless liquid was found was forty years of age, and entered the Hôtel Dieu to be operated upon for cataract. He was at the time jaundiced, which circumstance he attributed to grief for the loss of sight. He was operated upon, and the cataracts were removed, but the jaundice remained; and on examining the body after death the pancreas was found to be scirrhus, and it compressed the biliary ducts, thus preventing the flow of bile into the duodenum: the bile was replaced by a colourless fluid; the liver was strongly coloured.

‘ This fluid had an insipid, slightly saline taste, a smell analogous to that of putrid fish, a light colour, inclining to a greenish yellow; turnsole paper, reddened by acid, was restored to blue by dipping in this liquid; a paper dipped in acetate of lead, and exposed to the vapours that exhaled, was almost entirely blackened.

‘ The liquid, introduced into a cucurbite, to which a tube and globe were attached, was submitted to distillation. During this process, and at the moment of ebullition, a part of the liquid coagulated, and took the form of a green coloured pellicle. The fluid obtained from distillation emitted the odour of sulphuretted hydrogen. Tested by reagents, we recognised sulphate of ammonia, and a small quantity of animal matter, which had passed over during distillation. The fluid presented the following properties:—

‘ 1. Submitted to the action of lime or potash, a volatile alkali was disengaged, the presence of which was established by acetic and nitric acids, and muriate of platina.

‘ 2. Brought into contact with a solution of silver, a dark-coloured sulphuret of silver was precipitated: from this precipitate, collected upon a filtre, and submitted to the influence of heat, volatile sulphurous acid was evolved, and a small button of metallic silver was left upon the coal.

‘ The residue, after distillation, placed upon a filtre, was separated into two parts; the one liquid passed through the filtre, the other solid remained upon it. The solid part formed green-coloured pellicles, and stained paper in the same manner as oil does. Upon examination, it was found to consist of albumen, coagulated by heat. The green colour having attracted attention it was treated with alcohol at 40° R. for the purpose of separating the colouring matter from the albumen. In fact, the alcohol did not dissolve the albumen, but appropriated to itself the colouring matter, and received the green colour. This fluid filtrated while warm, was then evaporated; there remained after, two distinct substances, and separated from one another. The first and the most abundant was a fatty matter; it had a yellow colour, an insipid taste, but not

disagreeable. The other, of a green colour, was more solid; it had a sharp taste; the small quantity of this substance did not permit its thorough investigation, but the following properties were recognised:—it was acrid, and burnt like resins, giving a light ash, which was condensable by cold. The fatty matter exposed for some time in the open air became rancid, coagulated, and formed some crystals; these, however, were only composed of the fatty matter, which had taken a regular form. Exposed to the action of potash they afforded a perfect soap.

The liquid from which the albumen had been separated was evaporated in a porcelain vessel; it left a yellow residue of a pleasant taste and smell. This residue, dried by steam heat, was treated with alcohol heated to 36° R. The spirit filtered and evaporated, left some animal matter mixed with muriate of soda, and other salts. The animal matter was osmazome.

A part of the residue proceeding from the aqueous fluid that had been treated with alcohol, but had not been dissolved by this fluid, was treated again with water, which dissolved a part. This solution contained traces of muriate, of phosphate, and sulphate of soda, and a small quantity of animal matter. The portion insoluble in water and alcohol, and which was very little, heated in a glass tube, was reduced to a coal, yielding products like those that proceed from the decomposition of animal matter. The residue incinerated in a crucible, and treated with muriatic acid, was dissolved with an effervescence and the disengagement of sulphuretted hydrogen. Reagents indicated lime and phosphate of lime. The lime proceeded, without doubt, from a carbonate decomposed by the muriatic acid.

It follows, from this analysis, that this fluid differed in its composition from healthy human bile, and contained,

1. Sulphate of soda.
2. Albumen.
3. A fatty yellow matter, assuming a crystalline form.
4. A green matter, analogous to chlorophyll.
5. Osmazome.
6. Murates, phosphate and sulphate of soda.
7. Carbonate and phosphate of lime.
8. Sulphur and oxide of iron.

(*Journal de Chimie Médicale*, &c. Octobre 1826.)

VII. Treatment of Continued Fever. By Professor LAENNEC.

The cases of continued fever have been more numerous than any other. Many were very severe: they had not, in general, any decided character in common; some were accompanied by marked intestinal irritation, but the greater part of them were exempt from it. The most common complication, and which was seen in all the cases, was catarrh, more or less intense, only recognisable in the early part of the complaint by means of auscultation, the ordinary symptoms not appearing until about the middle period of

the fever. In two cases, a few days after the appearance of fever there were symptoms of violent peripneumony, which were happily combated by one, or at the most two bleedings, and afterwards by tartar emetic given in large doses. In all the cases which had an unsuccessful termination, symptoms of a peripneumony appeared a few days before death, to which M. Laennec gave the name of the *peripneumony of the dying*. It takes place in the posterior portion of the lungs, and is easily indicated by the stethoscope, a crepitating *râle* being heard near the vertebral column in the middle part of the back, a few days, and sometimes only a few hours, before death. M. Laennec took pains to shew how constantly this symptom was present, and how easily it might be recognised by this indication. The situation of the peripneumony is undoubtedly occasioned by the patient lying wholly on his back in the latter period of his malady; for in one patient, who died of a severe attack of fever, and who had been compelled, in consequence of ulceration of the sacrum, to lie upon his abdomen two or three days before his death, the peripneumonic engorgement was found to be much advanced, and occupying the anterior part of the lungs, the posterior portion being quite healthy.

‘The convalescence in some of the cases was much protracted, and diarrhœa was often the symptom the longest troublesome after the febrile symptoms had disappeared: it was generally best treated by the *diascordium* in the dose of half a drachm or a drachm daily—(an *electuary*, containing *gentian*, *tormentil*, *red roses*, *cannella*, *opium*, &c. &c.): but in some of the cases, even where the fever had been slight, the diarrhœa resisted every means, for two or three weeks, and then seemed to disappear of itself. In many of the cases, during convalescence, it was remarkable that the pulse was more frequent than it had been during the fever; and two cases which had been particularly severe, acquired an interest at this period from the following accidents: in one a critical abscess, as large as the fist, completely circumscribed, with heat and redness of skin, formed itself on the outside of the left thigh; in the other, there was incomplete paralysis of the lower extremities, which lasted some weeks, and yielded to the application of two moxas to the lumbar region of the vertebral column, but above all to time.

‘In the cases of simple fever, *la médecine expectante* alone was trusted to, and they all terminated well, more or less readily, the period of convalescence, excepting, in some cases already alluded to, being generally short.*

* One of these cases, however, terminated in a most extraordinary manner. There had been fever for four days, the subject of it a young man of eighteen, well made, and as strong as men usually are at that age. The form of the fever had been extremely simple, and for two days there had been complete apyrexia. The patient had recovered his appetite, his good spirits, and every appearance of perfect health, when suddenly, without any kind of precursory symptom, after having made his bed himself, and laid down in it, he called out, “I am suffocated,” and expired. On examination,

‘In some instances there was a well-marked critical deposit in the urine on the true critical days.

‘In the severe cases, simple *expectation* was not relied upon. When the plethoric state, or strength, or youth of the patient appeared to demand it, venesection was practised: when there was any severe local pain, leeches were applied, always in moderate number; and it should not be withheld, that even when they relieved the local symptoms, they never appeared to amend the general state of the patient. The diet of the patient was never very rigorous for more than two or three days. No occasion presented itself in which either tonics or purgatives were called for: M. Laennec considers them proper in many cases to promote the cicatrization of intestinal ulcers; and therefore, at least in this epidemic, only advised their employment in the decline of the malady.

‘Rasori has long administered tartar emetic in large doses in continued fever, and has boasted of his success. In the course of this *semestre*, seven patients were submitted to that treatment; but the success promised by the Milan professor was not realised. It is only fair, however, to say, that the cases were severe, and had reached that stage in which the physician feels and deplores the powerlessness of art: the prostration of strength great, the abdomen tense, with or without pain; the face of a dusky red colour, with an expression of stupor; the tongue dry, with an incipient crust upon it and the teeth; in some, diarrhœa was present; in all, the pulse was small and frequent, and the skin hot and dry. It was in these desperate circumstances, in which the ordinary resources of nature and of art offer no chances of success, that the tartar emetic was given in doses of three, four, or six grains during the day, dissolved in a pint of the infusion of orange-leaves, made very sweet, with the addition, when there was diarrhœa, of an ounce of the syrup of poppies. This medicament seemed to produce no immediate effects at all; for although it appeared, in two cases, to excite a little vomiting, in others it produced no effect of the kind, nor any change in the state of the tongue or bowels: the diarrhœa sometimes continued, without increase or diminution; in one patient it ceased, and did not reappear; in another it disappeared, and frequently returned; sometimes it was at first considerably augmented, and then became diminished. In short, the progress of the fever was probably exactly what it would have been under the employment of any other means; and four of the patients died. It is worthy of remark, that in one of the cases of fever, complicated with intense peripneumony occupying the whole of one lung, the dose of the tartar emetic was increased as far as twenty-four grains in one day, and afterwards eighteen grains daily, with the least evacuation upwards or downwards; and without the perspirations, which had previously existed, being increased or lessened.

sixteen hours after death, no apparent lesion of any kind was discovered, with the exception of a deep violet colour of the internal membrane of the heart and large vessels.

The symptoms of peripneumony were abated, but the fever kept its course, and carried off the patient. M. Laennec, therefore, by no means thinks the tartar emetic so efficacious in continued fevers, as in other inflammatory affections: he thinks its administration only not dangerous, and not more efficacious than other means. Examination of the bodies after death did not contradict this opinion. It may be mentioned, that one of the patients, who had been affected with fever in a severe form, and treated with tartar emetic in the dose of six grains during the day, but had become convalescent, having had no diarrhœa for some days, and being apparently out of danger, was suddenly attacked with enormous distension of the abdomen, attended with acute sensibility to pressure; severe pain in one part of the chest, great dyspnoea, remarkable alteration of the expression of the countenance, and died in the space of a few hours. This sudden termination was afterwards found to be occasioned by peritonitis, the consequence of intestinal perforation.—(*M. Lagarde's Report of Diseases at La Charité, 1825-26.*)

VIII. *Case of Poisoning by Nitric Acid.*

‘THE subject of this case was a cutler, aged twenty-six. Intending to take some of a mucilaginous mixture during the night, he mistook the bottle, and swallowed about half an ounce of aqua fortis. Being apprised of his mistake by the burning heat it occasioned in his throat, he sought to remedy it by immediately drinking a large quantity of water. He got over the first inconveniences by this means, and for a fortnight afterwards the only effect was a slight difficulty in swallowing, and a little alteration of his voice. At the end of this time, vomiting began to be troublesome, and soon so much so as only to allow of his taking liquid aliment. He then came to the hospital. His case did not at first seem to be very serious; he had no fever; his tongue was generally in a natural state, although sometimes of a lively red colour; no pain was excited by the strongest pressure of the epigastrium; the little aliment which was retained in the stomach appeared to be sufficiently well digested, but the greatest part of what was taken was returned by vomiting. These accidents were combated by every rational means, and, for a time, with a promise of success, for the vomitings ceased. But it was not long before they returned; the patient began to sink rapidly, nervous symptoms were excited, and were soon terminated by death.

‘On examination of the body, there was found no evident trace of the passage of the acid; but the mucous membrane of the stomach was destroyed to the extent of about half an inch round the pyloric orifice, exposing a sanious ulcer, round which the mucous membrane was separated, puffy, softened, granulated, and of a reddish colour, without any appearance of an artificial production.’—(*M. Lagarde's Report of Diseases at La Charité.*)

IX. *Case of Poisoning from Hyssop Tea.*

MR. DONALDSON, of Stonehaven, relates, in the *New Edinburgh Journal*, that he was called to an old woman and her daughter, *said* to have been poisoned by hyssop tea. The mother was delirious, highly excited, the pupils of her eyes amazingly dilated, the hands and feet were cold and clammy, the pulse small, very frequent, irregular; face pale, perspiration profuse. The daughter was sensible and collected, but sick and giddy; the pupils dilated, and sight dim; the pulse frequent and full. These symptoms might well have deserved notice, if the case had really been what the title indicates. But this case of poisoning by hyssop tea, so called by more than Hibernian license, was *not* a case of poisoning by hyssop tea, but by henbane, a plant of which was mixed with the hyssop. After this discovery, we do not exactly comprehend why this case was given to the public. Vomiting, which was excited after many trials, gave almost immediate relief.

The editor of the *Medico-Chirurgical Review*, with his usual good nature, has complimented several of his contemporaries on the plan of their Journals, and evidently conceives that he and they will long continue to divide the public favour. We hope they will. But we feel less regret at being left out of this comfortable prophecy, from a sort of suspicion we have that our intelligent editor of the *Medico-Chirurgical* is laughing at those he includes; for he has ventured to compliment the old *Edinburgh Journal* on the extent and value of its original communications, which we confess we have long considered the most faulty part of that respectable work, the reviews of which, though often long, and sometimes not written perhaps with sufficient attention to keeping up the interest of the reader, are generally very able productions. As the *New Journal* can scarcely yet be considered pledged to any particular line of management, we would honestly recommend its conductors not to imitate the old *Journal* in its worst qualities. It is easy to get numerous original cases: all young practitioners meet with wonderful things, and love to instruct the public; but we think they are seldom much valued by the readers, being often, as in the case which we began by noticing, published chiefly for the satisfaction of the writer.

X. *Case of Wound of the Heart.*

A CASE in which the heart was wounded was communicated a few months ago to the section of medicine of the French Institute, by M. Ferrus. A maniac, aged thirty-four, inflicted an apparently small wound upon himself, on the left side of the chest, between the fifth and sixth rib, about an inch below and without the nipple: the wound was made with a long small-pointed instrument. He was admitted into the hospital of the Bicêtre two days afterwards, at which time the wound was nearly cicatrised, but very painful to the touch: the pulse was small and intermitting; the respiration

anxious; and below the wound a particular kind of rustling was perceived,—a sort of undulating crepitation resembling that of a varicose aneurism. The patient assured his attendants that he had not been able to withdraw the instrument with which he had wounded himself. The treatment was limited to bleedings, and repeated applications of leeches to the region of the heart: but the respiration became daily more difficult, less deep: the patient became weak, and died on the twentieth day after the wound. M. Ferrus exhibited the heart of this individual to the section of medicine before the instrument was withdrawn from it, and dissected it before them. When the thorax was opened after death, the left lung was found to adhere intimately by its whole inner face to the pericardium: in the pericardium itself there were ten or twelve ounces of reddish-coloured granular, foetid sanies, and several pale-coloured fibrous clots; the walls of the pericardium were thickened, rugous, and manifestly inflamed: lastly, an iron stilet was found implanted in the substance of the left ventricle, and strongly fixed in the thickness of its fibres; it had traversed the ventricle from one side to the other, and its point had passed some lines into the cavity of the right ventricle. M. Ferrus thinks the circumstance of the patient surviving so severe a wound twenty days, is to be accounted for by the instrument remaining in the wound, and being immovable, acting as a coagulum, and moderating hæmorrhage and the effusion of blood into the chest, which effusion took place very gradually, the pulsations of the heart becoming every day less distinct. The effusion was in the end the cause of death, the heart not being inflamed in consequence of the wound it had received, and its action having after the first few days become regular, as if the organ had become accustomed to the irritation of the foreign body. M. Ferrus's opinion seemed to be entertained by the section, that any attempt to extract the instrument would have been dangerous, and contrary to the rules of art.—(*Revue Médicale.*)

Those who have not forgotten the terseness of Cornelius Nepos will remember the circumstances of the death of Epaminondas after reading this case. But is it not yet a question whether the heart could not bear and recover from a wound made by so small and sharp an instrument as that with which the wound was inflicted in Mr. Ferrus's case, if the instrument were merely suddenly introduced, and immediately withdrawn? In the alternate dilatations and contractions of an organ of which the muscular parietes are so thick and so powerful, it is possible that very little blood would escape, and inflammation might possibly soon repair the injury. We think there are cases of wounds of the heart on record in which a cicatrix after death proved something of this kind to have taken place.

XI. *Sittings of the Royal Academy of Medicine at Paris—*
May 2d.

M. GEOFFREY ST. HILAIRE made a report of some investigations

that he had made upon the incubation of the egg and the development of the chick, in an establishment for artificial incubation at Anteuil. By changing the position of the eggs submitted to incubation, he produced faults in the conformation of the chicks that proceeded from them. For instance, by placing the egg vertically, with the small end upwards, he had seen the yolk obtain the higher site, and the free air remain confined at the bottom. The yolk became adherent to the apex of the shell; the chick, instead of resting upon it, as usually occurs, was suspended: it hung by its abdomen. The long diameter of the ovula, which is crossways, no longer having sufficient space for this situation, is compelled to alter its position, and thus forms improper adhesions, either to the back, or the pelvis, or to the head; whence different kinds of monstrosities ensue. In the first case the spinal column is opened; there is spina bifida. In the second the pelvis is open; it forms a perfect plane, and the viscera fall upon the thighs. There is 'eventration.' Lastly, and in the third case, the head resembles that of a parrot. M. Geoffrey also discovered, that by depriving the shell of a part of its porosity, he could vary also the mode of development. The researches of M. Geoffrey may probably throw some light upon the laws of monstrosities. He has recognised also as erroneous, the common notion that the fowl changes the position of the egg at different stages of incubation: he has obtained a perfect development of eggs, which had remained throughout in the same position.

Injection of Putrid Matter into the Jugular Vein of a Horse.—M. Dupuy communicated an experiment of this kind. He had injected into the jugular vein of a horse two ounces of a matter drawn from an encysted tumour, situated behind the os hyoides of a cow which had 'le comage.' This matter was yellowish, caseous, inodorous, mixed with solid grains similar to what powdered bones furnish. After the second injection, an œdematous, circumscribed, hot, and painful swelling took place at the base of the chest and on the breast, which in two days increased to an enormous size, and finally suffocated the animal. On examination after death, the subcutaneous cellular tissue was found filled with a yellow, gelatinous matter: at a greater depth this membrane was marbled and sprinkled with ecchymoses; the muscles of the chest were as if carbonised (charbonnées); the nerves of the eighth pair, which traversed the swelling for more than a foot, were filled with a similar matter; small bloody striæ marked the nervous filaments, which were puffed and swelled.

Experiment upon Hydrocyanic Acid.—M. Dupuy introduced into the mouth of a horse destined to be killed a piece of sponge imbued with a mixture of seven drops of pure hydrocyanic acid, and twenty-four of distilled water. After a few moments, the horse staggered on his posterior extremities, and fell at once; respiration became quick and laborious; the nostrils dilated; the mouth open; the tongue, as also the eye and eyelids, were convulsed; the fore-

limbs were forcibly bent, exhibiting in this respect a difference from what occurs when *nux vomica* is given, when they are extended. The animal became comatose, and the pulsations of the heart very rapid. This state endured for twenty minutes, when they injected into the jugular vein a drachm of subcarbonate of ammonia dissolved in water: in a few moments the animal got up, regained his stable, and after an hour exhibited no farther consequences of the experiment than slightly accelerated respiration and circulation, and slight convulsive action in the subcutaneous muscles.

XII. *Rewards for Scientific Labours.*

THE French Academy (Institut Royal) has awarded to M. Louis, for his able work on Phthisis (reviewed in our Numbers for January and February of the present year) 2,000 francs; and to Dr. Civiale, for his publications on Lithotomy, 6,000 francs; and prizes of smaller amount to several other physicians and surgeons. We notice this, because we observe that an Englishman (Capt. Sabine) has obtained the astronomical prize, for his Account of Experiments to determine the Figure of the Earth by means of the Pendulum vibrating in different latitudes; and because a considerable prize is offered next year for whomsoever shall most distinguish himself on the subject of breaking calculi in the bladder, provided the competitors will be candid enough to give an account not only of their successes, but of the obstacles, accidents, reverses, and failures, they meet with. A gold medal, of the value of 895 francs, will also be adjudged in June next, to the author of the best work in experimental physiology, which shall be transmitted to the Secretary of the Academy before the 1st of January. A gold medal, worth 3,000 francs, is promised for the best general and comparative history of the circulation of the blood in the four classes of vertebral animals, before and after birth, and at different ages: this must also be forwarded before the 1st of January.

XIII. *The Thymus Gland.*

‘ THE thymus gland,—which in the natural state of the human subject ought to disappear after the first year of life, but which remains during the whole of life in some animals, and is periodically renewed, according to Tiedemann, in the sleeping animals every winter,—has as yet been very little considered as regards its pathology. Meckel has noticed the absence or imperfection of the thymus in acephalous fœtuses; but it has in other examples of this kind been found perfectly developed. The continuance of the thymus gland to a more or less advanced period of life, has been observed by many anatomists. Sandifort saw it in a child of thirteen, who had died with cyanosis, or the blue disease, the foramen ovale being open, and the aorta arising from both ventricles. Morgagni, Scheuzer, Haller, and others, have found it in subjects of from twelve to fifteen years of age, dead of various disorders. Walther found it in three adults—Meckel, the elder, in a man of

twenty-six; Meckel, the younger, in a man of sixty-three; and in these cases there was no other peculiarity of structure. In other examples it has been found to exist, and to have undergone considerable degeneration, or change of organisation; to be inflamed, scirrhous, full of abscesses, tuberculous; and in some cases, tumours of remarkable size and nature have been found in its place, giving rise to peculiar symptoms, oppressed respiration, decubitus difficilis, cough, paroxysms of suffocation, emaciation, hectic, sudden death.'—(*From a Paper on the Pathological Anatomy of the Lymphatic Ganglions of the Thorax, and on the Thymus, by F. G. Becker, of Berlin. Arch. Gén., Juillet.*)

XIV. *On the Leucæthiopia, Leucopathy, or Constitution of the Albinos.*

DR. MANSFELDT, of Brunswick, considers this peculiarity the result of a retardation of development which is to be dated at the earliest stage of formation. His opinions on the subject are contained in the following extract:—

Blumenbach admits the existence of cachexia in the Albinos. Great objections arise against this theory; for when there is a cachexy, or dissolution of the humours, phenomena occur very different from what are observed in leucopathia. Agreeing, however, with Blumenbach, that there is really something cachectic in the Albinos, I regard this cachexia as the result of disturbance in the first formation, and not as a cause of the characteristic phenomena of the leucopathic constitution. One of the best proofs of this disturbance in the first formation, is the absence of the pigmentum nigrum; for the choroid and other membranous parts of the eye of the fœtus, which, in the natural state, are already covered with a layer of this pigment at the most early period, are destitute of it in the Albinos at all ages. It is singular, that although such attention has been given to the human embryo, no certain knowledge seems to have been gained respecting the period when the pigmentum nigrum is formed. It is probable, that in this, as in other instances, the *nisus formations* conforms to a law of progression. Wrisberg found the black choroid visible through the sclerótica in an embryo of ten weeks, whilst in another embryo of three months he found no trace whatever of the pigmentum. Albinus found the eyes perfectly formed in a fœtus of six weeks; but Soëmmering dissected two embryos of six weeks, and only found the eyes perfectly developed, and with the pigmentum nigrum in one of them, the other having no appearance of the kind. Blumenbach only met with the pigmentum in embryos of five months. Although it is uncertain, therefore, at what period the pigmentum is formed, it appears at least not to have been observed before the sixth week of fetal life. If we conclude, then, that the pigmentum nigrum does not exist at six weeks, all the other parts of the eye being formed at that time, the state of the eye at that period is precisely that of the Albinos, or of the leucopathic eye, the formation of

which is arrested by obstacles to the development of the pigmentum.

'The skin of the Albinos furnishes us with another proof that leucopathy is the result of a retardation of development. It is not only destitute of pigment (*rete mucosum*), as Burzi has demonstrated,* but it possesses the lanuginous tissue which appears properly to belong to the foetal age.'—(*Journ. Complém. Juillet.*)

XV. *Interstitial Pregnancy.*

'THIS species of pregnancy consists of the development of the embryo in the proper substance of the uterus, of which few cases have yet been recorded. M. Breschet, in a memoir read by him before the Academy of Sciences in December 1825, proposed to call this peculiarity *graviditas in uteri substantiâ*; by Professor Mayer, of Bonn, it is denominated *graviditas interstitialis*. When this circumstance occurs, the case terminates fatally in an early stage of gestation, the thin external wall of the uterus being ruptured, and more or less blood, together with the product of conception, flowing into the cavity of the abdomen. Death in these cases takes place suddenly, and is preceded by the usual symptoms which attend the giving-way of the viscera and internal hæmorrhages. M. Menière, of the Hôtel-Dieu, gives the following note of references to examples of this accident:—

- 'A case published in 1801, by Schmidt, in the sixth week of gestation.
- | | |
|-------|---|
| _____ | 1811, by Albers, two months and a half. |
| _____ | 1817, by Hederich, three months. |
| _____ | 1821, * * * *, eight months. |
| _____ | 1823, by Bellemain, three months. |
| _____ | 1825, by Dance, three months. |
| _____ | 1825, by Moulin, two months and a half. |
| _____ | 1825, by Auvity, one month. |

'In all these instances, with two exceptions, the rupture took place at the angle of the Fallopian tube on the *left* side: in the two exceptions, it took place on the *right* side, in the same situation. The subjects of all the cases had previously borne children. The symptoms did not continue more than twenty-four hours in any, excepting one, before death supervened.'—(*Nouv. Biblioth. Médicale.*)

XVI. *Hæmorrhage from the Ovarium.*

'HEMORRHAGE from the ovaria is of rare occurrence, particularly in the absence of pregnancy. A case related by Dr. Drecq, of Moulins, is remarkable, inasmuch as the subject of it had experienced no irregularity of menstruation, nor any other symptoms of

* Dissertazione sopra una Varietà Particolare d'Uomini Bianchi. Milan 1784.

a nature to rouse the attention of the physician, until, without any evident cause, she complained of violent colic of the whole abdomen, followed, after some hours, by extreme paleness, and great alteration of the features and dilation of the pupils; together with vomiting, tension, and tumefaction of the abdomen, and faintings; in short, with all the signs of internal hæmorrhage: the patient died in the course of a few hours. On opening the abdomen, about three pints of black blood flowed out: the peritoneum, the stomach, the intestines, and all the organs contained in the abdomen, were pale and discoloured, but in a healthy state; with the exception of the left ovarium, which had acquired the size of a large hen's egg, and resembled the spleen of a patient dead of scorbutus.'—(*Nouv. Biblioth. Méd., Juillet.*)

XVII. *Efficacy of Nux Vomica in Dysentery.*

'A WOMAN, aged twenty-two, affected with acute dysentery, after using various domestic remedies for three weeks, finding her malady increase, applied to Dr. Muller, of Werl. Two days before, she had taken, under the direction of a *pharmacien*, an emetic, which acted briskly, and of which the first operation was succeeded by violent abdominal pains, distressing tenesmus, and the evacuation of small portions of mucus strongly marked with blood: the pulse was extraordinarily frequent, and occasionally intermitted; the face and extremities were covered with a cold perspiration; the tongue was brown and dry—the thirst immoderate; the abdomen was tumid, tense, and painful,—and there was frequent hiccup. In these desperate circumstances, Dr. Muller prescribed the following potion:—R Extract of nux vomica, gr. x.; mucilage of gum arabic, an ounce; distilled water, six ounces; syrup, pulp of tamarinds, each an ounce. M. A spoonful to be taken every hour. At the same time, the abdomen was rubbed with camphorated liniment and laudanum, and fomented with chamomile of flowers, &c., and gruel and diluents were given, with the addition of a very small portion of brandy and yolk of egg. When this treatment had been pursued for three days, the patient fell into a calm sleep, which lasted five hours, perspiration coming on, and this was followed by manifest relief. The mixture being now all taken, the other means were continued,—and after some days the patient was decidedly convalescent.'—(*Nouv. Biblioth. Méd., from Hufeland's Journal, Cabier Supplem.*)

We can scarcely consider this case as with any propriety called an instance of the efficacy of *nux vomica*.

XVIII. *Experiments on the Process of Digestion, in a Boy with a Fistulous Opening into his Stomach.* By Dr. WILLIAM BEAUMONT.

'ALEXIS SAN MARTIN, a lad of eighteen years of age, received a hail shot from a musket, into his left side, in consequence of which,

after a suppuration of more than twelve months, there remained a fistula of the stomach, immediately between the fifth and sixth ribs. Upon this, Mr. Lovell, an American surgeon, the reporter, undertook to conduct some experiments with regard to digestion. The results of these researches are as follow:—

‘ *Experiment 1.*—About twelve o'clock noon of August 1, 1852, in the Fort of Niagara, Dr. Beaumont introduced into the fistula, still remaining between the ribs of San Martin, the following substances, placed upon a silk thread, at moderate distances from each other, in order to avoid pain being produced by their introduction, a piece of highly seasoned *beef à la mode*, a piece of lean salt beef, a piece of raw salt fat pork, a piece of lean raw beef, a piece of powdered beef, boiled, a morsel of bread, and a portion of raw, white cabbage, each about two scruples. The lad proceeded with his domestic occupations. About an hour after the pieces were drawn out and examined. The cabbage and the bread were about half consumed, the meat unchanged, upon which they were returned. At the end of the second hour the cabbage, bread, pork, and boiled beef were quite digested, and disappeared from the thread, the other pieces of meat were but little affected. They were returned as before. At the third hour, the stoved and spiced beef (*beef à la mode*) was partly consumed, the raw beef was some little softened upon the surface, but its cellular texture was, upon the whole, quite firm and uninjured. The fluids of the stomach smoked, and tasted somewhat rancid. The lad complained of some pain and uneasiness in the breast. The matters were again returned. About the fifth hour, he suffered considerable oppression in the stomach, universal weakness and faintness, and some headach. The pieces of meat which remained appeared much the same as at the two preceding hours, the fluids were more rancid and acrid. As he now complained very much, they were not again returned.

‘ The following day he complained of sickness, headach, and costiveness; pulse weak, and skin dry, tongue loaded; and upon the internal surface of the stomach appeared many little white specks or patches, as if of coagulable lymph. Dr. Beaumont introduced, through the opening, half a dozen pills, each containing four or five grains of calomel, which, after three hours, purged strongly, and removed all the symptoms above mentioned, as also the peculiar aspect of the lining of the stomach. Their operation was exactly the same as if they had been taken by the mouth, only the sickness usually produced by swallowing pills was wanting.

‘ *Experiment 2.*—On the 7th of August, about eleven o'clock forenoon, after San Martin had fasted for seventeen hours, the tube of Kendall's thermometer (Fahrenheit's) was put fairly into the stomach, through the opening, and five minutes afterwards the mercury rose to 100° Fahrenheit, at which degree it remained steady. By the introduction of a syringe of elastic gum through the opening, an ounce of pure gastric juice was extracted, put into a three ounce glass, and in this was deposited a piece of boiled

corned beef, about the size of the little finger. The vessel was duly supported, placed in an earthen vessel filled with water at 100 Fahrenheit, which was kept steadily at the same temperature, by means of a sand-bath. After forty minutes, the solution had evidently commenced upon the surface of the beef; after fifty minutes, the fluid became turbid and cloudy, the external fabric began to seem slack and loose; after sixty minutes, it assumed the appearance of pap, and, about one o'clock, when the solution had proceeded as regularly as in the last half hour, the cellular membrane seemed entirely destroyed, the muscular fibres lay loose and unconnected, and floated about in very fine, short, soft, white flexible threads. About three o'clock the muscular fibres had disappeared to the half of what they had been two hours before. About five they were almost entirely dissolved, and only some few fibres remaining. At seven their structure was totally decomposed, and only a very few small fibrils were seen floating in the fluid, which at nine, was, in every respect, a complete solution. The gastric juice, which, when recently taken from the stomach, appeared almost as clear and transparent as water, had, about this time, the appearance of bubbles, and deposited, after it had been allowed to rest a few minutes, a fine, flesh-coloured sediment.

Experiment 3.—At the same time with the above experiment, a piece of meat, exactly of the same kind, was introduced into the stomach, through the opening. After an hour (about twelve o'clock) it was found, on being brought forth, to be about as much dissolved as that in the vessel, and resembling it very much in appearance; so it was again returned to the stomach. About one o'clock the silk thread was drawn, but the meat had separated itself from it, and was dissolved. The operation of the gastric juice upon the beef was exactly the same in the stomach as in the vessel, only more rapid after the first hour, and sooner completed. In both, the action began upon the surface, and confined itself to the latter alone. Motion accelerated the solution in the vessel, for it removed the superficial dissolved pulp, which still embraced what was entire, and opened a way for the gastric juice to the still undecomposed parts of the meat introduced.

Experiment 4.—On August 8, at six in the morning, an ounce and a half of gastric juice was put into a three ounce phial, and, as in the second experiment, two small pieces of boiled chicken, taken from the back and breast, were introduced. The solution proceeded, as in the former experiment, only somewhat more slowly, as from the more solid texture of the cellular membrane in fowl than in beef, the solution appeared to be more reluctant, whilst the gastric juice could not in it, as in the former, make an impression upon the spaces between the fibres of the muscles, but merely acted upon their surface. The solution took place, like that of a piece of gum in the mouth, till even the smallest particle was dissolved. The colour of the fluid, after the chicken had been dissolved, was grayish white, appearing more milky, and less full of

bubbles, than the beef in the former experiment with the gastric juice. The deposit also was clearer, but, in other respects, similar. Both vessels were kept from the 7th and 8th of August, in which the experiments were made, to the 6th of September, closely shut up. Their contents were without fœtor, without acid, and void of any taste or smell whatever. Soon after the 6th of September, the phial with the beef began to corrupt and smell strongly; that with the chicken remained sweet, and in good condition.'—(*New Edinburgh Journal of Medical Science for October.*)

SECTION II.—INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. *Morbid Anatomy.*

'ARTERIAL SYSTEM. *Aneurism of the Aorta.*—Male subject, apparently sixty years of age, strongly muscular. A pipe was inserted in the right carotid artery, and the body injected. On opening the chest, the commencement of the aorta, uncommonly large, presented far towards the left side of the chest. A tumour of great size was found extending from the origin of the left subclavian artery down to the sixth dorsal vertebra, swelling out on the left side, so as to occupy the largest part of the left cavity of the chest: the tumour extended across the spine at the upper part, over the first and second dorsal vertebræ, so as to be more than two inches within the right cavity of the chest. When filled with injection, the commencement of the aorta lay immediately under the articulation of the upper ribs with their cartilages, attached by a circular adhesion; the anterior part of the tumour was within two inches and a half of the inner surface of the chest. Over this part of the tumour, the trachea and œsophagus were placed, the trachea being on the left, and so much turned round as to have the membranous or posterior part exactly on the right side. In consequence, the trachea was at this part flattened, having full one-third of its calibre obliterated. The œsophagus was partially covered by the trachea. At the lower part, the left division of the trachea doubled round the tumour to get to the left lung. It was compressed flat, and its calibre obliterated by adhesion. The left lung was entirely destroyed, occupied about one-third of its proper space, and was entirely hidden by the tumour. In texture it resembled a very hard liver, and gave a sensation when cut into similar to that produced by cutting into a firm turnip.

'The continuation of the aorta came from the lower part of the tumour, opposite to the sixth dorsal vertebræ, though so far to the left as to be considerably curved toward the centre before it reached

the bodies of the vertebræ. It was very much enlarged far below its separation into the common duct.

‘ On removing the ribs of the left side, a fair view was obtained of the tumour. It was firmly attached to the pleura over the heads of the fourth, fifth, and sixth ribs. On the right side a similar attachment was observed over the bodies of the fourth, fifth, and sixth dorsal vertebræ. When this attachment was cut through, the back part of the aneurismal tumour was opened. This posterior part was filled with large clots of blood, very firmly coagulated, and they rested on the vertebræ without any intervening substance. All the left half of the fourth, fifth, and sixth vertebræ, were destroyed, as if by ulceration, and this destruction extended to the heads of the ribs which were within the tumour.

‘ Some specks of ossification were observable around the edges of the posterior part of the sac where adherent to the vertebræ. The distension produced by the aneurism had consolidated the posterior mediastinum in such a manner as to render it impossible to distinguish any part of it. The coats of the aneurism were of uniform thickness, except at the edges adhering to the vertebræ, beyond which they were discontinuous.

‘ In Baron Ferrusac’s Bulletin for 1824, the dissection of a celebrated comic actor is given. This man throughout his life had been subject to a singular hoarseness, which was thought to be owing to some disease about the glottis; but after his death, which suddenly happened, it was discovered that there was no original disease in any part of the trachea, but that an aneurismal tumour, very similar to that above described, compressed the trachea for a considerable extent.

‘ Although we have no knowledge of the symptoms which were present during the life of our subject, we are led to believe that his voice must have been much altered by the compression of the left division of the trachea. As the œsophagus was also much compressed, difficulty of swallowing very probably existed.

‘ **RESPIRATORY SYSTEM.** *Abscess, and Suppuration of the Lungs.*—Subject, female, apparently twenty-five years of age, extremely emaciated, having a long neck and very narrow chest. When the left cavity of the thorax was opened, there was no part of the lung apparent. The space usually occupied by the lung was void, and seemed to have been emptied of a fluid previous to death, as some flocculent matter resembling whitish coagulated mucus still adhered to the surface of the membrane lining the chest, which was red, thickened, and universally adherent to the ribs. At the lower and back part of the chest, instead of lung, there was a mass of brownish, ash-coloured matter, which had several openings communicating with the cavity of the chest. When cut into, the substance seemed to be nothing more than a collection of half-coagulated puriform substance, intermingled with flocculi resembling half-boiled membrane. The right cavity of the chest was natural in its appearances.

DIGESTIVE SYSTEM.—The stomach of the same subject was in a condition which is often referred to by medical writers as preventing the operation of medicines. The internal surface was lined with a thick investment of mucus, so tenacious and dense as to appear like an additional coat; and nothing but actual experiments could have convinced me that such a vitiated secretion could be thus fixed on the villous coat. In attempting to remove it, I inverted the stomach, and washed it, first in cold, then in warm, and afterwards with soap and water, but without removing any notable quantity. I next rubbed it between my hands, as if washing a cloth, by which a few flakes were detached; but the greater part of it still adhered. If this condition of stomach frequently occurs during disease, it must be next to impossible that medicines can be administered with any advantage. There was a considerable quantity of ether mixed with the fluids in the stomach; but even this powerful agent might as well have been placed in contact with dead matter, for any effect it could have produced on a surface coated as this was. The same condition is thought to exist in cyanache trachealis, which frequently renders emetics almost entirely unavailing, unless the most powerful and stimulating are administered. In delicate females, habitually costive, and leading a sedentary life, I have several times suspected this state of the stomach, which rendered the system almost utterly insensible to the presence of medicines. One instance of this kind, which occurred in the practice of my much-esteemed friend Dr. John W. Buckler, of Baltimore, required the most violent emetics at a time when the patient appeared so much prostrated, that a slight exertion might destroy her. The emetics, after some very violent efforts, caused the discharge of a thick, lining mucous substance, resembling an entire coat of the stomach broken into large flakes; and a great improvement in her state of health immediately followed. The extreme prostration in this case was the consequence of want of nutrition, as the digestive functions must have been for some time altogether suspended. It would be of great moment, if we could determine with any certainty the condition of system leading to this state of the stomach, which always must indicate the use of emetics, notwithstanding the apparent debility may be truly alarming.’—(*From a Paper, by Dr. Goodman, in Philadelphia Journal for May 1825.*)

II. Extract from a Report upon a Memoir of M. Balard, respecting a New Substance. By GAY-LUSSAC, VAUQUELIN, and THÉNARD.

M. BALARD has given to this substance the title of *muride*, against which many objections presenting themselves, we have substituted that of *brome*, *Bromes*, a disagreeable odour. Brome is liquid at the ordinary temperature of the atmosphere, and even at 18° R. below zero. In mass, its colour is a deep reddish brown; in thin layers,

it is a hyacinthine red; the colour of its vapour is like that of nitrous acid; it is very volatile, and evaporates at 47° R.; its odour is very strong, and resembles the odour of chlorine; its density is about 3.

'Brome destroys colours exactly as chlorine does, and is soluble in water, alcohol, and æther. M. Balard has combined it with several simple bodies, and has obtained some remarkable compounds. Chlorine is more powerful than brome, and brome than iodine. This property is remarkable, and makes it very probable that brome cannot be a compound of chlorine and iodine, as its affinity to these two substances would lead us to suppose.

'If we would form an exact idea of the properties of brome, we must compare it with chlorine.

'With hydrogen it forms an hydracid, the hydobromic acid, and with oxygen the bromic acid, the combinations of which, with different bases, have great analogy with the chlorates.

'When heated, it decomposes, like chlorine, all the soluble alkaline oxides, and disengages oxygen; cold it combines with these oxides, and forms bromurets, easily decomposable by heat or the weaker acids. It combines with percarbonated hydrogen gas, and produces an oleaginous liquid, of a very sweet ethereal odour.

'The weight of its atom is 9.328, taking oxygen as unit.'—(*Journal de Chimie Médicale*, &c. Sept. 1826.)

III. Académie Royale de Médecine. July 4, 1826.

'M. ADELON, in his own name and that of MM. Vauqueline and Orfila, read a report upon the question, *Whether salt, in which powdered glass had been mixed, could cause death, whether introduced into the digestive canal at different times, or all together?* The commissioners began their investigations by inquiring into the nature of the suspected salt: this salt, of which a quantity had been sent, appeared, both to the naked eye, and when assisted by a lens, to be the common culinary salt, of a large grain, and mixed with portions of broken glass of an equal size. To decide this point, they dissolved a part of it in distilled water, and, filtering the solution, the powdered glass remained upon the filter, and its nature could not be mistaken. Testing the solution, they found that it did not form a precipitate either with sulphuric acid or sulphate of potash; consequently it contained no metallic salts, and that it was only a solution of muriate of soda. Applying themselves then to the question, whether this mixture could cause death? they determined in the negative; for the following reasons: 1st, the suspected mixture would have been mixed with a liquid aliment, and then the salt alone would be dissolved, and the glass being precipitated, the innocent part of the mixture only would have been taken: or, 2dly, the suspected mixture would be mixed with solid food, and still, even in this case, no injury would probably ensue, or only inconveniences of little importance; many obser-

vations and experiments, both on men and animals, having proved that glass, even in large fragments, may be introduced into the digestive organs with impunity.'

Experiments upon the Effect of Compression in Poisoned Wounds.—'M. BOUILLAUD read a memoir upon this subject. The experiments are nine in number. In the first five, M. Bouillaud introduced two or three grains of strychnine into the cellular tissue of a rabbit's thigh; and accordingly as he practised compression or not, either by a ligature placed above the place where the poison was applied, or by a cupping-glass in which no vacuum had been formed, or even with the hand only placed upon the wound, he prevented or produced tetanic convulsions and death: he established, by many trials, the good effects of compression, by making the convulsions appear or disappear, as pressure was withdrawn or applied. In a sixth experiment, M. Bouillaud applied six leeches round a small wound into which he had introduced some strychnine, and he remarked that not a single leech would bite. They all however died, though they had not imbibed any of the poisoned blood. In the last three experiments, M. Bouillaud substituted half a tea-spoonful of hydrocyanic acid for the strychnine, and produced the same effects. He regards these experiments as confirming the opinion that poisons are absorbed, and the results of Dr. Barry's researches as to the proper mode of treating poisoned wounds.'

Experiments upon Pulmonary Exhalation.—A memoir, by MM. Breschet and Edwards was read. It is an ascertained fact, that pulmonary perspiration expels quickly the different gaseous and liquid substances that have been mixed with the blood. This has been placed beyond all doubt by the experiments of Nysten and Magendie; and the experiments of MM. Breschet and Edwards have the explanation of this phenomenon for their object. Barry's experiments having proved that absorption is prevented by abstracting atmospheric pressure, these physiologists conceived that since exhalation differs from absorption only by its opposite direction, exhalation ought to be accelerated by whatever attracts the fluids from within outwards, as absorption is facilitated by whatever draws them from without inwards: they conjectured that inspiration was this power, and that it must attract mechanically the fluid of the body to the surface of the mucous membrane of the lungs, precisely in the same way that it causes the external air to enter their cavities. To determine the value of this conjecture, they made the following experiments:—

1. Having adapted a tube, which communicated with a pair of bellows, to the trachea of a living dog, they made an ample opening in the thorax of the animal, and natural respiration was immediately suspended: by the assistance of the bellows, however, they maintained an artificial respiration, and thus preserved a constant pressure upon the internal surface of the lungs, so that it no longer

exhibited the same differences as exist in the alternate movements of natural respiration. They then injected some camphorated spirits of wine into the peritoneal cavity; and, while in another dog upon which they made a comparative experiment, leaving the respiration natural, this substance appeared in the pulmonary perspiration after a few minutes, in this dog they never appeared at all. They then exposed in one place the muscles of the abdomen, and having applied a cupping-glass, the odour of the camphor was quickly perceptible upon the cupped surface. Thus, therefore, when the pulmonary surface was no longer submitted to the attractive power of inspiration, the exhalation of which it is the seat ceased to excrete the substances contained in the blood; and, on the other hand, the exhalation, of which the skin is the organ, immediately discovered these substances in that part which had been submitted to the suction of a cupping-glass.

‘ 2. They injected some essential oil of turpentine into the crural vein of two dogs, one of which had been treated as in the former experiment, and the other respired naturally. In the last, the oil of turpentine was very quickly exhibited in the pulmonary exhalation, and on opening the body the pleura and substance of the lungs were much more strongly imbued with it than the other tissues; in the former the turpentine was less perceptible in the pulmonary exhalation; and on opening the body the lungs were not more impregnated with the odour than the other structures; the odour was not more sensible, for example, in the lungs than in the peritoneum. Accordingly, in the former case, the suction power of inspiration seemed to have attracted the whole of the turpentine into the pulmonary exhalation, and to have withdrawn it from the other tissues; and, in the latter case, the pulmonary surface being deprived of the power of inspiration, the lungs participated in the odour of the turpentine, in common with the whole of the body.

‘ 3. Having injected into the crural vein of a dog, in whom artificial respiration was maintained, some phosphorus dissolved in oil, they saw the phosphorus in the pulmonary exhalation, but could not attract it to the surface of the stomach, by the application of a cupping-glass; but MM. Breschet and Edwards explain this contradiction to their first experiment, by maintaining, with Magendie, that a gross oil is incapable of traversing the last ramifications of the pulmonary artery; that, consequently, it cannot arrive at the heart and arterial system; and that, arrested in the capillaries of the lungs, the contractions of the right ventricle cause it to issue through the pulmonary cells.

‘ 4. MM. Edwards and Breschet observed that all parts of the skin do not equally respond to the application of the cupping-glass. The skin of the thigh, for instance, does not emit the odour of the camphorated oil so quickly as the region of the stomach. These physiologists conclude, therefore, that the suction which accompanies each inspiratory movement is the circumstance that deter-

mines the exhalation of liquid and gaseous substances accidentally mixed with the blood through the lungs, rather than through the other exhalent organs of the body.—(*Revue Médicale*, Septembre 1826.)

IV. *Medical Jurisprudence.*

WE are induced to extract the following case from a paper upon homicide committed in a state of insanity, by M. de Boismont, on account of a circumstance somewhat similar having lately occurred in Birmingham. A man having nearly severed his wife's head, left his house, and immediately surrendered himself. The coroner's verdict was wilful murder, and the man is committed for trial to Warwick, where he now lies. He did not attempt to deny that he had committed the murder, and expressed a wish to suffer for it. We have heard some circumstances since, that at least render insanity very probable. The case below is extracted by M. de Boismont from Metzger, *Médecine Légale*, 1780.

'In 1778, a woman N—— murdered an infant of four years old, near one of the gates of Königsberg, with whom she had come in a cart from a neighbouring village. It appeared that severe domestic grief was the original cause of this murder. Conceiving, in consequence of a quarrel with a bailiff's wife, that she should be taken by force before the judges of the place, she ran away, and took refuge with a person of her acquaintance. The next day she left here, to find a peasant in whose service her brother had been, and while with him she formed the project of murdering his child. At first she rejected this sanguinary idea; but she soon became accustomed to it, and determined upon executing it. This was the train of reasoning by which she confirmed herself in her crime. The peasant's infant was an only child; I also am an only child; I have always been unhappy; a similar lot is perhaps reserved for her, and it will consequently be better for her that she should be killed. That she might execute her design, the woman N—— induced the peasant to trust the child to her. Scarcely had she taken her resolution, than she stole a knife, concealed it, and then employed herself in sharpening it, that her victim might not suffer. In the evening she assisted the peasant to look for the knife. Her departure took place, and at a short distance from the village, she begged the father, who accompanied her, to execute a commission for her, in a neighbouring house; this removed him on the instant. The woman N—— cut off the head of the infant at a single blow, covered the body with a shawl, and immediately delivered herself into the hands of justice. Interrogated, she answered, that the conduct of the bailiff's wife, &c. had exasperated her so much as to give origin to the horrible deed, for which she wished to be punished with the whole rigour of the law.

'Farther inquiries proved that the father of N— had been melancholy, that she herself had been maniacal two years before, and that from this state had passed into melancholy and a love of solitude. The verdict was, that N— was a maniac, and should be treated as such.'

V. Acetate of Morphium,—tests of.

'THE presence of acetate of morphium in a liquid may be proved by the addition of nitric acid. A red colour is produced by this means. This colour can only arise from the presence of morphine, strychnine, or brucine; but if the liquid contains morphine, hydrochlorate of tin produces a yellow colour; if brucine, a violet colour; and if strychnine, it becomes colourless. These appearances are considered by Dr. Vassal as, added to the symptoms presented, infallible proofs of this poison having been administered: but the dissection should, in these cases, be made, at the farthest, ten or twelve hours after death. After this time, every thing has disappeared by absorption.'—(*Bulletin des Sc. Méd. Août 1826.*)

VI. Analysis of the Tartar of the Teeth.

IN our notice of Mr. Koecker's work on Dental Surgery, we professed our ignorance of the chemical nature of the tartar of the teeth: the following account of it is given in the Edinburgh Journal of Medical Science:—

'It results from a chemical analysis of the tartar of the teeth, by Messrs. Vauquelin and Logier, that this substance contains thirteen per cent of its weight of an animal matter, yellowish-white, which exhibits not the slightest trace of gelatine, and differs, in consequence, from the animal matter of bone; nine per cent of carbonate of lime; 1.77 grains of tartar contains fifteen millegrammes ammonico-magnesian phosphate. These able chemists believe that the animal matter is analagous to mucus.'—(*Journal de Pharmacie, &c.*)

When writing the notice above referred to, we overlooked the circumstance of Berzelius having analysed the tartar of the teeth. His analysis is as follows:—

| | | | | | | |
|--|---|---|---|---|---|------|
| Earthy phosphates | - | - | - | - | - | 79.0 |
| Undecomposed mucus | - | - | - | - | - | 12.5 |
| Peculiar salivary matter | - | - | - | - | - | 1.0 |
| Animal matter soluble in muriatic acid | - | - | - | - | - | 7.5 |

100.0

(*Annals of Philosophy*, ii. 381.—*Thompson's Chemistry*, vol. iv.)

VII. Pathology of Gout.

'M. MAZUYER, of the French Institute, having constantly found uric acid in the bony concretions of arteries and veins of gouty

persons, thinks that this acid constitutes the immediate cause of gout, and argues against the opinion of gout being simple inflammation. He consequently recommends the employment of a soap of which the base is potash and acetate of that alkali. If vegetable diet is favourable to gouty persons, it is because vegetable substances contain potash. If milk also exhibits some advantageous effects against gout, M. Mazuyer also attributes the benefit to the potash which the milk contains, and which he thinks is probably in the state of acetate. It appears certain, at least, that purgatives, combined with calcined magnesia, sometimes prevent a fit of the gout. M. Mazuyer, of course, thinks that in the treatment of gout we ought chiefly to keep in view the neutralising the uric acid.—(Ed. Journ. of Med. Sc.)

VIII. Case of Precocious Puberty in a Girl.

'THE subject of this case was a girl of seven years of age. She is described as having had an "hæmorrhage" six weeks before she was seen by the relater, Dr. Gedike, which lasted four days, and again, in a similar manner, three weeks afterwards. She was unusually tall for her age; her countenance was that of a person of mature years; her extremities thin; her chest narrow; neck developed; lower part of the abdomen tumid and tense. The external organs of generation had the appearances of puberty; the *labia majora* were very large. The child had never complained of any uneasiness in her chest or abdomen. Her tongue was unusually thick. Her appetite was small, and her evacuations were scanty: the pulse hurried. When the hypogastric region was touched, a solid irregular body was easily felt, and a round and hard body was also felt in the rectum. The hæmorrhage again recurred, twice, at intervals of six weeks. Lastly, gangrene made its appearance in the lower part of the abdomen, and the child died. On dissection, the pelvis was found filled with the solid body already mentioned. The uterus, which was in the middle of this tumour, was rather large for the age of the child, and pushed out of its place by several tumours. The right ovary and fallopian tube were much distended, and contained three or four ounces of dark-coloured fluid. The left ovary was not so much distended, but it was insensibly lost in steatomatous tumours.'—(Bull. de Sc. Méd.)

IX. On the Employment of the Koumiis.

'THE koumiis, or whey of mare's milk, is recommended by the physicians of St. Petersburg as particularly salutary in diseases of the chest; but its good effects are only to be derived during the first months of summer, before the herbage begins to be dried up. The koumiis is a favourite drink of the Baschirs and wandering tribes.'—(Bull. de Sc. Méd.)

X. *Lithontriptic Instruments.*

' M. CIVIALE reports to the Academy, that, by further improvements of his lithontriptic instruments, he is enabled to break down calculi more readily than heretofore; and that he can accomplish this, without any danger, when the calculus is eighteen lines in diameter, which could not have been undertaken before.'—(*Rev. Méd. Août.*)

M. Meyrieux disputes the priority of M. Civiale's discovery, and claims it for himself. M. Amussat does the same. The claims of both are referred to a committee.

XI. *Platina.*

' The price of this valuable metal has been reduced considerably at Petersburg, according to M. Humboldt, by the discovery of mines of it in the Oural mountains.'—(*Id.*)

XII. *Vaccination.*

' DURING the past summer the small-pox was introduced into a town in the *arrondissement* of Remiremont, in the department of Vosges, containing 1900 inhabitants. Twenty-five deaths occurred, none of them in persons who had been previously vaccinated. M. Grosjean, who reports this fact, asks if a person may be exposed to the infection of small-pox with impunity on the seventh day after vaccination, the vaccination having perfectly succeeded. This question was referred by the Academy to the commission of vaccine. We should suppose the answer must be in the affirmative.'—(*Rev. Méd.*)

XIII. *On the Extract of the Indigenous Poppy.*

' SOME of the French practitioners have used the European opium very extensively, and are disposed not only to allow its possession of the valuable properties of the Asiatic, but in some respects to give it the preference. M. Drousart, in a memoir on this subject, asserts, that the indigenous opium of France, whilst it is equally soothing in its effects, has the advantage of not producing *narcotism*. M. Ricard-Duprat, a *pharmacien* at Toulouse, reports, that he has found the pains of cancer mitigated by the indigenous opium, when the exotic drug was ineffectual. Other practitioners assert, that the sleep procured by the indigenous opium is undisturbed by the reveries and intoxication produced so often by the opium usually employed. M. Drousart means to give a chemical explanation of these differences, which, if they could be well established, might make the cultivation of the poppy in the fine climate of the south of France of great importance.'—(*Rev. Méd. Août.*)

XIV. *Death of Dr. John Barclay.*

THIS able and well-known lecturer on anatomy in Edinburgh died on the 21st of August last, at his house in Argyle Square.

'Originally destined for the church, Dr. Barclay turned his attention to physic about the year 1790, though almost to the last he continued an elder, and repeatedly sat in the General Assembly. In 1796, he took his degree of M.D., and soon after commenced teacher. Besides his success and usefulness in this capacity, his writings on *Medical Nomenclature*, on *Muscular Motion*, on the *Arteries*, and on *Life and Organisation*, bear ample testimony to his learning and industry; and the museum, which he has bequeathed, with a reservation in favour of his successor, Dr. Knox, to the College of Surgeons, is a noble monument of that zeal for the science which he taught, with which he was not only animated himself, but inspired his auditors. An habitual good humour endeared Dr. Barclay to a very extensive circle of acquaintance. His age was sixty-six. He has left no family.'

Thus far the obituary of the Edinburgh Journal. Dr. Barclay was a zealous, well-informed, industrious man, possessing in a singularly rough frame a mind highly stored, and not devoid of elegance. He was liberal to men of all nations and parties; sanguine in his temperament, hearty in his manners, and particularly national in his speech. His lectures, when we had the advantage of attending them, were deprived of almost all interest by the utter destitution of *subjects*. One subject, or at most a subject and a quarter, was considered a handsome allowance for the season. The museum attached to Dr. Barclay's school was, we think, the only valuable thing of the kind to which students had access in Edinburgh: the industry, intelligence, and labour, with which the objects it contained were collected, would have conferred distinction on any university: but Dr. Barclay always remained a private lecturer.

In speaking of this worthy man, it ought not to be forgotten that he possessed the most extensive collection of anecdotes of any man in all Scotland, always excepting perhaps Sir Walter Scott; and these he detailed in long succession whenever he was not compelled to attend to his duties, narrating, and laughing at them himself with an indescribable appearance of enjoyment. This was his relaxation; for his general diligence was most exemplary. In the present situation of the Edinburgh school, we fear the loss of Dr. Barclay will be severely felt.

XV. *Death of M. Laennec.*

Of this distinguished professor, whose work on Auscultation is so well known in this country, and of whose services pathological science has, we regret to say, been recently deprived by his death, we hope to be able to give a short biographical account in our next Number.

XVI. *Notice concerning the Warm Springs of Bourbonne-les-Bains* By Professor FODÉRÉ, of Strasbourg.

BOURBONNE-LES-BAINS is a well-built pleasant town, situated at the extremity of the rich valley of Bassigny, at the foot of cultivated

heights which communicate with the last of the range of the Jura mountains on one side, and with the commencement of the chain of the Vosges on the other. The neighbourhood is beautiful, the climate agreeable, provisions are reasonable, and the inhabitants civil to strangers. Convenient baths have been erected,—and the properties of the water, which flows most abundantly, are such as merit notice, although Professor Fodéré's account of them may be considerably abbreviated with advantage.

The temperature of the water is between forty and fifty degrees of Reaumur. 'Baudry, who wrote about these waters nearly a hundred years ago, made numerous observations on this heat, and deduced the following facts:—

' 1. That it does not burn the mouth, throat, or hands, as artificial heat would of the same degree,—and is productive of no kind of unpleasant sensation.

' 2. That when placed on the fire the water does not boil sooner than common cold water set to boil at the same time.

' 3. That when allowed to cool, its volume is much more diminished than that of common water which has been heated; and when heated again, it is found to have lost many of its qualities: it contracts a very disagreeable smell when left for some days after cooling.

' 4. That eggs cannot be boiled in it; but if left in it for four-and-twenty hours they become thick, and acquire a rotten taste.

' 5. That it cools much more slowly than common water.'

These observations have been verified by Professor Fodéré. The following is the chemical analysis of the waters made by M. Athénas:—

In a litre (about a quart) of the water:

| | | | |
|----------------------|---|---|---------|
| Muriate of soda | - | - | 4.76325 |
| Muriate of lime | - | - | 1.02750 |
| Muriate of magnesia | - | - | 0.13925 |
| Muriate of lime | - | - | 0.81075 |
| Sulphate of magnesia | - | - | 0.35775 |
| Carbonate of iron | - | - | 0.03125 |
| Carbonic acid | - | - | 0.36000 |
| Loss | - | - | 0.02650 |

Total, 7.15625 grammes (scruples) of fixed constituents, and 0.36000 of volatile principles.

The medical properties of the water, of which Professor Fodéré has not spoken, may readily be understood from the analysis.—(*Journ. Complém.*)

XVII. *Ripa upon the Plague.*

THIS author published in 1522; and his volume is analysed in the *Journal Complémentaire* for August last, by the M. de Baron Desgenettes. The matter most worthy of notice in the analysis is the long dissertation upon physicians, and the author's extreme

dislike to the Jews. Among other things, he inveighs strongly against the 'Avenionenses, qui se suosque liberos in infirmitatibus committunt Judæis perfidis et Christianorum inimicis;' and then adds for himself, 'Christianus, agnosco veritatem Christi dicentis, Si me persecuti sunt, et vos persequentur. Mortem profectò appetit, qui à Judæo sanitatem exquirat, quia sine auxilio Christi se sanum fieri putat.' He also gives the following admirable specimen of toleration, being the decree of one of the councils :—'Audi quid sancta synodus septima disposuerit: Nullus eorum qui in sacro sunt ordine, aut laicus azuna Judæorum manducet, aut cum eis habitat, aut aliquem ab eis eorum in infirmitatibus suis vocet, aut medicinam ab eis percipiat, aut cum eis in balneo lavet; si verò quisquam hoc fecerit, si clericus sit, deponatur, si laicus excommunicetur.' His requisites for a physician are deserving attention, even at the present day. 'Nulli magis convenit mansuetudo quàm medico; nam qui vulneribus sanandis præest, vino debet et oleo, uti, exemplo Samaritani, sobrietas, pudicitia, &c. &c.'

XVIII. *Bite of the Viper.*

M. PIORRY reports the following case to the Royal Academy of Paris, in which the cupping-glasses were successfully applied. A man, aged forty-five, was bitten in the right hand by a viper. In two hours the whole arm was painful, tumefied, and benumbed; the temperature of the body was lowered, and the circulation retarded, the pulsation of the radial arteries and of the carotids could not be perceived; nausea, vomiting, and involuntary stools succeeded, with enormous tumefaction of the face. The wounds of the hand were laid open, and a cupping-glass (*ventouse à pompe*) applied for half an hour: some serous fluid flowed from the wound, with which a cat was inoculated without any bad effects. The symptoms gradually abated. The next day, the supervention of phlegmonous erysipelas being apprehended, forty leeches were applied; and the patient recovered.—(*Nouv. Biblioth. Méd.*)

XIX. *Medical Benevolent Society.*

WE have been requested by the Directors of this Society to give further publicity to the following address, and which we have much pleasure in doing. We are sorry to find that the disproportion between its probable claims and its funds is so great. We have no hesitation in giving it as our opinion, that every medical man who has the power ought to contribute to this or a similar society.

'This Society was established in the year 1816, for the purpose of affording relief to such of its members "as are in distressed circumstances, from mental or bodily infirmity, or who, from other causes, shall be considered as requiring and deserving of assistance."

'By a rule of the Society, no claim can be made on its fund

till " after the expiration of *ten years* from the date of its establishment, when, but not sooner, relief may be granted."

' The period, therefore, is now arrived, when claims may be made; and the Directors are anxious, as speedily and as effectually as possible, to exercise the discretionary power vested in them; but they have the mortification to find, that the fund of the Society is very small,* whilst they have strong reasons for believing that the claims upon it will be numerous.

' Instances of extreme necessity, to which medical practitioners of every rank have been reduced, are frequent and notorious. From the reports of " The Society for the Benefit of the Widows and Orphans of Medical Men in London and its Vicinity," it appears that *one in four* of the families of its deceased members has received relief from that fund.

' An attempt to explain the causes of the indigence of so many members of a useful and honourable profession, would be here irrelevant. It is, however, a melancholy fact, that such indigence does exist,—which might probably have been prevented or mitigated by the establishment and liberal encouragement of institutions similar to this.

' Although the Medical Benevolent Society has been honoured by a munificent and approving donation from his Majesty,—by the illustrious patronage of his Royal Highness the Duke of Sussex,—by the benefactions of several noble and eminent persons,—and by the countenance of the most distinguished of the profession in the metropolis, still its fund is wholly inadequate to the attainment of its objects; and although all medical men, throughout England and Wales, may be admitted amongst its members, yet the present number of them is in the proportion only of *two hundred and fifty* to upwards of *twelve thousand*!

' That a Society constituted for a purpose so laudable, and upon principles so generally approved, and acted upon by other learned and scientific professions, should have been established for so many years, and yet have been so little encouraged, can only be accounted for on the supposition, that its real objects and advantages have been either but partially known or wholly misunderstood.

' The Directors of the Medical Benevolent Society, fully convinced of its utility, respectfully and earnestly, by this address, recommend it to the attention of the profession at large; and they trust, that those who are raised above the contingencies of a medical life, will, from motives of benevolence, afford it their patronage; and that the less affluent will, from motives of prudence, spare the trifling sum† required from their present incomes, in order to insure to themselves and to their families the means of assistance in the time of adversity.'

* ' The capital is 2600*l.* sterling; the annual aggregate income is about 280*l.*'

† The terms of admission are, one guinea on admission, and one guinea per annum in advance; or twenty guineas at one payment, constituting a life subscriber.—Application to become a member must be addressed, post-paid, to the Secretary, Mr. H. C. Field, 95, Newgate-street.

XX. *Ascent of the Spider.*

' OF the aërial ascent of the *spider*, Mr. Murray entertains the very probable opinion, that the animal projects its filaments into the air by the aid of an electric state, which repels the particles of the atmosphere, and makes way for it in whatever direction it requires to be projected. The following reasons, upon which his views are founded, appear to be of great weight.

' 1. The spider which exhibits this singular phenomenon, so long since noticed by Dr. Martin Lister, is of a *peculiar species*, being distinguished from the *Aranea obstetrix* of naturalists. There are two *Aranea obstetrices* mentioned. That of Strack, in particular, is striped, and has the eyes arranged in the form of a square. The other is also different from the true aërial spider, which Mr. Murray therefore denominates *Aranea aeronautica*.

' 2. They are often suddenly precipitated from the atmosphere during meteorological changes, or the loud firing of artillery.

' 3. Mr. Murray has observed, in a favourable position, a visible aura, or atmosphere around the thread.

' 4. He finds the thread by which the spider suspends itself, considerably deflected from the perpendicular towards the wall, which he attributes to the attraction subsisting between the wall, as the conductor, and the electrified filament.

' 5. They cannot ascend by a single thread, except the air be very warm, and its electric character high.

' 6. The propelled threads do not interfere with each other. They are divellent, repelling each other. Flame does not attract them; the finger does.

' 7. When a metallic conductor is brought near the suspended spider, it disarranges its projectiles; and the insect, conscious of some counteracting agency, promptly coils up its threads. A stick of sealing-wax, when excited, repels the thread, which is therefore negative.

' 8. The threads are propelled into the atmosphere, in defiance of the laws of gravitation, and the resistance of the medium; and remain always in the precise place in which they were impelled.'—(*Edin. Journ. of Med. Science.*)

Clinical Report of the most prevalent Diseases during the preceding Month.

OCTOBER has been close and damp, with a few cool days at the beginning of the month. Much rain has fallen at intervals, but we have not yet experienced any continuance of wet weather.

The prevalent disorder of this month has been diarrhoea, which has been more common than usually happens in October. In very many instances fever was ushered in by this symptom, and ran a mild but lengthened course, uninfluenced apparently by any remedies. Occasionally, the pain at the stomach was very intense, and in such individuals the application of leeches frequently removed the disease at once.

Fever has continued to increase, and we have heard of some very severe cases among the better classes of life. In the lower ranks it has exhibited, almost without exception, a very mild character. There has been giddiness, headach, not often very intense, and general debility, loss of appetite and languor. Very frequently the patients have been able through the whole disease to walk about, though not to follow their usual occupations. In some instances, a severe cough, with profuse expectoration, has supervened, and led to a suspicion of serious organic alteration having taken place in the lining membrane of the bronchi. It has continued for two or three weeks, and ceased almost spontaneously. In other examples, the head was principally affected, and a slight headach and dislike of light accompanied the whole course of the disorder. In a third variety, there was merely languor, thirst, and occasional hot skin, without its being possible to fix upon any one organ as peculiarly deranged.

Asthmatic disorders are already making their appearance, but we have not yet seen any very severe instances. Rheumatism has also been somewhat more common than in the preceding month.

We have been much interested in a case of most severe pain in the shoulder joint, unaccompanied by any external redness or heat. The patient, a stout man, fifty years of age, and a common labourer, was not sensible of having met with any injury. The pain extended from the shoulder over the pectoral muscle, and its general character was that described as indicating the commencement of intercellular erysipelas. Not long since we witnessed a fatal example of that malady, which, from what we could learn, had exhibited the exact symptoms of the present case. In this patient, however, the application of twenty leeches at once, and active purgatives, sufficed to remove the disease. He is now quite recovered.—The case of diabetes is still under treatment, but without any material improvement. The appetite is less, and the skin perspires profusely. The urine is still very saccharine.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. On Galvanism, with Observations on its Chemical Properties and Medical Efficacy in Chronic Diseases, and on some Auxiliary Remedies. By M. La Beaume, Medical Galvanist, &c. Pp. 271.
2. No II. of New Edinburgh Medical Journal.
3. *Recherches, Expérimentales, &c. sur la Digestion.* Par Fred. Tiedemann et Gmelin.
4. An Essay on Morbid Sensibility of the Stomach and Bowels, as the proximate Cause or Characteristic Condition of Indigestion, Nervous Irritability, Mental Despondency, Hypochondriasis, &c. &c.: to which are prefixed, Observations on the Diseases and Regimen of Invalids, on their return from Hot and Unhealthy Climates. By James Johnson, M.D., of the Royal College of Physicians.
5. A Letter to Sir Gilbert Blane, Bart., Physician to the King, &c. &c. &c., from Sir A. Carlisle, Surgeon Extraordinary to His Majesty, &c. &c. &c., on Blisters, Rubefacients, and Escharotics, giving an Account of the Employment of an Instrument adapted to transmit a Defined Degree of Heat to effect those several purposes.

THE METEOROLOGICAL JOURNAL,
From the 20th of SEPTEMBER, 1826, to the 19th of OCTOBER, 1826.
 By Messrs. HARRIS and Co.
Mathematical Instrument Makers, 50 High Holborn.

| September | Moon. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|-----------|-------|-------------|---------|------|------|---------|----------|------------------|----------|---------|----------|------------------|---------|----------|
| | | | 9 A. M. | Max. | Min. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 9 P. M. | 10 P. M. |
| 20 | | | 60 | 64 | 52 | 29 | 76 | 29 | 86 | 92 | 75 NE | NE | Rain | Fair |
| 21 | | | 57 | 64 | 46 | 29 | 96 | 30 | 03 | 74 | 71 NE | NE | Fair | Fine |
| 22 | | | 48 | 60 | 44 | 30 | 07 | 30 | 04 | 74 | 71 SE | E | | Fine |
| 23 | | | 51 | 61 | 52 | 29 | 97 | 29 | 86 | 75 | 74 ESE | E | Fine | Clo. |
| 24 | | | 54 | 64 | 59 | 29 | 70 | 29 | 63 | 85 | 89 ESE | SSE | Clo. | Clo. |
| 25 | | | 61 | 65 | 52 | 29 | 62 | 29 | 70 | 91 | 85 SE | SW | Cl. r. | Clo. |
| 26 | | 70, | 62 | 66 | 59 | 29 | 76 | 29 | 84 | 90 | 90 SW | SSW | Rain | Fair |
| 27 | | | 63 | 68 | 58 | 29 | 87 | 29 | 97 | 77 | 84 W | SW | Clo. | Fair |
| 28 | | | 65 | 69 | 55 | 30 | 05 | 30 | 09 | 83 | 85 SW | SW | Fair | |
| 29 | | | 58 | 69 | 65 | 30 | 04 | 29 | 84 | 88 | 84 SW | ESE | | |
| 30 | | | 65 | 70 | 51 | 29 | 67 | 29 | 73 | 87 | 85 SSW | SW | | Clo. |
| 1 | ☾ | | 57 | 65 | 47 | 29 | 73 | 29 | 79 | 85 | 81 SW | WSW | sRain | Fine |
| 2 | | | 49 | 61 | 48 | 29 | 84 | 29 | 85 | 87 | 80 SW | WSW | Fog. | Fair |
| 3 | | | 50 | 60 | 49 | 29 | 81 | 29 | 80 | 84 | 87 WSW | W | Fair | Fair |
| 4 | | | 50 | 58 | 42 | 29 | 66 | 29 | 68 | 85 | 74 WSW | N | Fog. | Fine |
| 5 | | | 44 | 54 | 39 | 29 | 67 | 29 | 82 | 78 | 71 W | NNW | | Fine |
| 6 | | | 41 | 53 | 41 | 29 | 98 | 30 | 07 | 75 | 68 NNW | W | | Fog. |
| 7 | | | 44 | 59 | 42 | 30 | 00 | 29 | 93 | 75 | 78 W | SSW | Fair | Fair |
| 8 | ☾ | 38, | 58 | 62 | 48 | 29 | 83 | 29 | 70 | 86 | 86 SW | WSW | Clo. | Rain |
| 9 | | | 51 | 57 | 46 | 29 | 69 | 29 | 70 | 82 | 78 SW | WSW | Fair | Fine |
| 10 | | 25, | 50 | 67 | 58 | 29 | 63 | 29 | 72 | 89 | 89 SSW | W | Rain | Rain |
| 11 | | | 61 | 67 | 59 | 29 | 92 | 30 | 00 | 89 | 84 WSW | WSW | Fog. | R. & f. |
| 12 | | | 61 | 65 | 59 | 29 | 99 | 29 | 96 | 92 | 81 WSW | SW | Rain | Fair |
| 13 | | | 61 | 67 | 47 | 29 | 93 | 30 | 10 | 89 | 73 WSW | N | Fair | Fine |
| 14 | | | 49 | 60 | 55 | 30 | 11 | 30 | 11 | 76 | 86 NE | E | | |
| 15 | ○ | | 60 | 65 | 55 | 29 | 82 | 29 | 62 | 86 | 86 SE | SSE | | |
| 16 | | 15, | 58 | 65 | 45 | 29 | 54 | 29 | 66 | 90 | 76 S | WSW | | Rain |
| 17 | | | 46 | 60 | 50 | 29 | 89 | 29 | 88 | 81 | 79 SSW | E | Fog. | Fair |
| 18 | | | 55 | 61 | 57 | 29 | 87 | 29 | 91 | 93 | 88 E | ENE | | Clo. |
| 19 | | | 60 | 66 | 58 | 29 | 89 | 29 | 89 | 92 | 95 E | E | Clo. | |

The quantity of rain fallen in the month of September was 2.99 inches.

NOTICES TO CORRESPONDENTS.

We have received a communication respecting the College of Physicians, to which, had it not already appeared, we might have given insertion: We are somewhat surprised, however, that the author should have deemed the *Russisch-Asiatisches* a proper medium of publication, after having shewn his predilection for what we consider a system of unqualified business.

Our correspondent from Reading will observe that the subject of his communication has not been overlooked by us. The same observation will be made by those whose previous suggestions or remonstrances we have seemed to disregard.

R. R. on the inadequate remuneration of general practitioners in the country, is under consideration. We see little hope of such a combination among them as would alone remedy this evil; the foundations of which are implicated with the general want of protection under which the profession labours.

Several Communications are received, and are under consideration.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

The Index to the preceding Volume will be delivered with the next Number.

The readers of the *Russisch-Asiatisches* are requested to correct the following obvious errata in the article on the State of the Medical Profession in the October Number:—

Page 334, line 13, after this, insert it.

— 335 — 5, for *where* read *was*.

— — — 30, for *have read* has.

— 336 — 41, for *they have read* it has.

— — — 42, for *themselves read* itself.

Communications, and Works for Review, are requested to be addressed (post-paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 156.

DECEMBER 1, 1826.

VOL. XXVI.

No. XVIII.—NEW SERIES.—VOL. III.

PART I. REVIEW.

I.

LIFE OF DR. BATEMAN.

Some Account of the Life and Character of the late Thomas Bateman, M.D., F.L.S., Physician to the Public Dispensary, and to the Fever Institution, in London. London, LONGMAN and Co. 1826. 8vo. Pp. 228.

THE physician whose life and character are portrayed in this little work was well known to most of the practitioners of the metropolis; and his justly-acquired reputation for learning, talent, and practical ability, which was every year increasing, when he was prematurely taken from the business of this world, was such as to render an account of his early education, his course of study, and the habits of his life, of considerable interest to those students who may emulate his fame. Certain circumstances connected with his religious opinions, and the remarkable change they underwent sometime previous to his death, on which circumstances we shall dwell as delicately as possible, have thrown a peculiar interest over the latter part of this biography. The untimely termination of his life, which is in every respect to be regretted, was no less so we think on this account,—that if he had been indulged with the length of years which were accorded to Dr. Baillie, the continued influence of his serious feelings might have presented us with an example of a religious physician against which no possible exception could have been taken. Removed by sickness from all his habitual occupations before his remarkable conversion, and never strong enough wholly to return to them afterwards, those

VOL. III. NO. 18.—NEW SERIES. 30

who are determined to doubt, find some excuse for so doing in the probable diminution of his intellectual with his bodily power. These doubts are ably combated, and at some length, by his friendly biographer; and to those who feel more than a common interest in this subject, we recommend a careful perusal of what he has said upon it. The author of the *Life of Dr. Bateman* has evidently not thought himself necessarily restrained within the limits of mere medical biography, and has occasionally extended his observations, more perhaps than was required, to subjects which are rather connected with biography in general than with the life of any particular individual: but the air of truth, and the evidences of a cultivated mind and a carefully-regulated heart, are so numerous throughout his pages, that no one can read them without being in many parts led into salutary trains of reflection, or conclude them without a just sense of the various excellencies which concur to the formation of what may be termed one of the highest of human characters, that of a Christian physician,—one whose deep sense of religious truth is not allied to any want of power to compete with his fellow-men in any walk of intellect, and whose ability to investigate, and judgment to decide, can be proved by productions connected with worldly science, and calculated to improve the medical learning of his time.

The childhood of Dr. Bateman was undistinguished by any indications of ability, or any fondness for books: his constitution was delicate, and his disposition apparently indolent: even at the age of eleven, he was indifferent either to employment or amusement; and his great pleasure was to sit for the greatest part of the day on the top of a gate near his father's house. His father of course despaired, as many a father does in these circumstances, of his son's ever being 'good for any thing.' We forget when we are arrived at manhood the reveries that filled and delighted the mind in our youth. Your continually active boy, who is always using his knife, or his pencil, or his pen, is generally a very dull fellow, who has no internal sources of pleasure; he cannot build palaces or create new worlds, and will never soar beyond mediocrity. Those who are destined to higher exertions are generally a little idle and unskilful at school, and their subsequent elevation is consequently a frequent subject of wonder. To enter into all the causes which tend to produce these effects would lead us far away from the subject of the present article,—into the endless controversies on the subject of education, into the boundless field of metaphysics,—and be of very little service after all. It is sufficient for every individual of talent to be convinced, that he had not

justice done him in his youth ; and it is only necessary to have to think of the education of another generation to find out how it happened. Children are doubtless more sensible of slight circumstances of situation, of encouragement and discouragement, than is generally supposed : the change from one school or master to another will often effect an astonishing revolution in the habits, and most probably a simultaneous one in the feelings of a clever boy. It was thus with Bateman ; he languished and drooped until placed by accident in a school of repute at Thornton, near Whitby, which was his native town.

‘ Here, from the very first, he distinguished himself, and took the lead in every branch of learning, to which he devoted himself with an ardour altogether different from his former habits. Such, indeed, was his thirst for knowledge, that he joined sparingly in the active sports of his school-fellows, although he exceedingly enjoyed them, especially cricket. He pursued his studies even in his hours of leisure ; and almost his only relaxations were music, drawing, and botany.

‘ The last-mentioned subject was favourable to his health, as it induced him to take exercise. He ranged the whole country for many miles round in search of plants ; and before he left school had completed an extensive *hortus siccus*. Astronomy and electricity were also among his favourite pursuits ; and without having seen either a planetarium or an electrical machine, and with great disadvantage as to tools and materials, he made both, as well as an Æolian harp, from the descriptions in Chambers’s Dictionary, cutting all the wheels of the former with his penknife. His extraordinary diligence and industry, his docility, and his habits of punctual obedience, made him a great favourite with all his masters ; and he was never once punished in all the years he was at school. Mr. Mackereth was accustomed to observe, that his most remarkable faculty as a school-boy was his sound and penetrating judgment ; and that he was not so much distinguished by quickness, as by the unceasing energy and vigour with which every power of his mind was kept in full and active employment, and brought to bear at once upon every object presented to it.’—P. 14.

The father of Dr. Bateman, who was also a medical practitioner, died when his son was only fifteen years of age, but not before it had been determined that he should study physic : he was consequently taken home, at sixteen, to attend the shop of an apothecary ; but appears to have been allowed time to cultivate mineralogy, the French language, and the society of those whose conversation could be useful to him : he was at this time also compelled, much against his own inclination, to study mathematics, which he used to say was the only study he ever pursued without pleasure. At nineteen, after an excellent preparatory education, and with

valuable habits of industry, without which no man ever yet really and permanently excelled others, he went to London. Nor should it be omitted, as a proof of his affection and filial attention, that from this time, through all the years of his industrious absence, in an ambitious capital, he never omitted, in compliance with a promise made before he left home, to write to his surviving parent once a fortnight, endeavouring by a detail of his occupations to fill up the melancholy void which busy sons are too apt to forget their departure from the home of their infancy makes in the kind hearts they have left behind.

When Mr. Bateman began the study of anatomy, and of the practice of physic in London, Dr. Baillie was in the height of bodily and mental vigour (1797-98), and able, in consequence of not being yet engrossed by practical duties, to benefit the students at St. George's by his talents and example as a lecturer. If we had not so recently spoken at some length of this great and good man, we should certainly quote the beautiful passage in which his peculiar merits as a lecturer, and his influence over his hearers, are so eloquently described. For this, however, we must refer to the book itself; but the reflections arising out of this are so just, so important, so often forgotten, so applicable to the present times, in which attainment is so often considered as superseding all other considerations, that we cannot forbear to insert them.

‘Of all the departments of human employment, there is, perhaps, only one in which the formation of an appropriate moral character is of more moment than in the medical. And to this end, the influence of the character attributed by the class to their teacher, and associated imperceptibly by his pupils with all their thoughts of him, is of the first importance. It is not sufficient that the qualifications of the Professor be of even first-rate excellence in regard to the subject which he expounds; although it be undeniable that this will be followed, not only by a proportionate popularity, but often by an enthusiastic admiration and attachment; and that, under such a leader, scholars of merited distinction will in turn be formed. These scholars are in a short time to take upon themselves the charge of attending the sick: and unless they go to this office with some sense of its serious responsibility, how much must be wanting, be it obvious or not, to its just performance! Although, therefore, nothing to this effect may be directly urged in the lecture-room, the impression made there may be deep enough to affect the whole course of life which commenced upon leaving it. For young men to think of their approaching profession only as the means of attaining to emolument or fame, may in some instances be sufficient to stimulate them to the requisite diligence; but unless there be implanted in their minds a sentiment in respect to their instructors of

a higher nature than this—if they think wholly, or chiefly, of getting all the knowledge they can, without reference to the high moral objects for which it should be sought—the best of them may quit the schools with little else than their knowledge, and the fame and emolument which they reckon upon its winning for them, in their thoughts. To acquire insensibly, on the other hand, a respect, a reverence for the professional principle, will far more certainly insure activity and perseverance in study, and the necessary acquisitions for practice, and will place them afterward on ground at the same time inexpressibly more comfortable and more useful. These inestimable advantages demand no specific moral disquisitions in the theatre. A fit moral education being pre-supposed, they only need for their security that he who presides there should himself exhibit, like Dr. Baillie, the professional character in all his language and deportment; that he should come into it, and be heard of out of it, only as a man really in earnest to fit them as well as he is able to do all the good to their fellow-creatures they possibly can. There is much in the world to be done,—and to be done by them, if done at all. But it will be done as it ought to be, only by those who set out with this principle, and who keep to it in all their difficulties.’—P. 33.

Bateman went to Edinburgh in 1798; was clinical clerk to Professor Duncan, senior,—a diligent and distinguished student, and an active member of the Medical Society of that city, of which he was elected one of the presidents,—an office which is honourable or not according to the manner in which it is attained. The proceedings within the Hall of the Royal Medical Society of Edinburgh present in miniature the proceedings of the great world without: some of those who reach the wished-for eminence of the chair do so by means of talents actively employed, by the force of eloquence, or by the weight of character; others gain the same object by bustle, canvassing, and intrigue. Dr. Bateman was one of the former, and is one among the many stars which shine along the list of members of that most respectable and useful Society,—a Society of which the tendency has always been to excite the industry and enlarge the mind of those who have frequented its meetings,—whilst the advantage it affords of forming valuable friendships, as well as that of access to an invaluable library, constitute it no unimportant appendage to the first school of physic in the world. He took his degree in 1801, choosing for his thesis the subject of hæmorrhœa petechialis; and we shall perhaps find that the same disposition which led him to select this subject for his dissertation, and that of bronchocele for his paper in the Medical Society, and cutaneous disorders for his principal work, led also to the peculiarity of some opinions which he entertained for many years of his life, and which were by no means unna-

tural to a mind which delighted in noting and recording plain and undoubted facts and circumstances, of which the nature was palpable, and capable of direct proof.

‘ Dr. Bateman was now to enter upon a new and more important field. He had completed every part of his education with credit, and was provided with every preliminary to practice. His summers he had spent with his family in the country; and they were passed in the pursuit and enjoyment of those accessory accomplishments in knowledge which are more ornamental to none than to the physician. To none perhaps are these indeed so useful; since, while they refresh his spirits, they enlarge his mind by information illustrative of all which peculiarly belongs to his profession, and qualify him for his rank; and thus add to his efficiency as well as his dignity.’—P. 41.

Considerations of this kind may advantageously be suggested to those over-zealous students who think that every hour ought to, or rather who conceive that every hour *can*, be wholly devoted to physic. This pursuit, like every other, may be successfully prosecuted with a less total sacrifice of time. Students too often deceive themselves by a belief that the acquisition of information leaves no time for reflection upon it; and are inclined, out of their laudable diligence, to confound relaxation with indolence. The *time* employed in study is far less important than the *attention* which is given to it: those who imagine they do not stoop to the seasonable relaxation of amusements, too often pass half their days in unavoidable reverie; but the wiser student should, by the intermixture of literary studies with those of a more strictly professional character, and by a participation in the amusements of good society, endeavour not merely to relieve and invigorate his mind, but to acquire that general information, and those manners, which will make him not only more welcome in the higher classes of society, but more useful in all. Nothing is more common than to hear medical practitioners regretting that they have no time to read, no time to visit, no time to go to any place of amusement, no time to go to church. Some there undoubtedly are in the profession, who, unfortunately for themselves, are thus engrossed; to whom every day brings its wearisome task; and whose hurried life passes away in occupations, from which, on account of their harrassing multiplicity, they can derive no satisfactory reflection, except that of heaping up riches which they know not who shall gather. But the complaint of want of time is not confined to these eminent persons; it is repeated by numbers who have no foundation for complaining, except absolute indolence, a want of management, a carelessness concerning all that interests and elevates the more cultivated part of

society, and a culpable indifference to any interests which do not end on this side of the grave.

After he came to London, Dr. Bateman became a pupil of Dr. Willan. How much he profited by that circumstance he abundantly shewed afterwards. His assiduity at the Public Dispensary led to his being appointed Assistant Physician: and in 1804, when Dr. Dimsdale resigned, he became the colleague of Dr. Willan and Mr. Pearson; and was appointed Physician to the Fever Institution in the same year. His work on Cutaneous Diseases, his Reports of the Diseases of London, and his Account of the Contagious Fever of this Country, are the brilliant results of these appointments, and sufficiently testify with what industry, and with what ability, he discharged his laborious public duties.

‘It is difficult to convey a just representation of the earnestness with which he gave himself up to these duties, and to the farther pursuit of that knowledge which had already qualified him for them so well. But, in detailing the routine of a literary man’s life, it may be important to mention his minute economy of time, because it was that, in conjunction with the unceasing activity of his mind in which it originated, which enabled him to carry his researches to such an extent, and to provide that fund of learning he was at length in possession of. It would be hardly too much to say that he never wasted a minute. His pen was always in his hand the moment he came down stairs in the morning. His papers and books were on the table during the short interval which elapsed before he breakfasted: and again, at dinner time, the little space that intervened between his return home and his dinner being put upon the table, was employed in the same way, unless, indeed, it was given to the organ. For, much as he delighted in music, almost the only time which he spent on it was this little interval at dinner-time, and the somewhat longer one in the twilight of evening, which so generally passes unoccupied, but which he had been accustomed to employ in this manner from a school-boy, always distinguishing it then by the term of *fiddling time*, because he could make no other use of it. In his daily rounds at the Dispensary, he was equally careful not to waste time, taking every short cut, and not disdaining to contrive how to save even a few steps,—since all these savings in the aggregate procured him a little more time.

‘He soon became a contributor to the diffusion of medical knowledge by his pen; and devoting more time proportionately to reading, his studies were always protracted beyond midnight, generally till two or three o’clock in the morning,—and sometimes resorting even at these hours again to his organ (and especially to the sacred pieces of Handel, in which he took great delight) for the relief of the mental fatigue he so incurred.’—P. 58.

He was for some time joint editor of the Edinburgh Medical Journal, in which his Dispensary reports were originally

published. The eleventh volume of that valuable work contains a biographical account, from his pen, of his friend, Dr. Reeve, of Norwich, who also assisted Dr. Duncan, jun., in the editorship: in the eighth, there is an account of Dr. Willan also written by him. He contributed very extensively to Dr. Rees's Cyclopædia,—and is said by his biographer to have gone through these labours with considerable ease to himself, first diligently preparing for his task, and then writing readily and fluently, almost without the necessity of subsequent correction or interlineation. He was at the same time by no means negligent of society, and highly enjoyed, though he rarely indulged in, general reading: he was not at all insensible to the charms of poetry, and indeed seems to have been capable of deriving rational gratification from all those sources with which bountiful Nature has supplied those who seek for them, and which, whilst they are useful to all, may be said to be needful to the physician, whose profession somewhat limits his amusements, to whom it is important to know how to live alone, and who, without some of these pursuits, may be led to seek relaxation after severe mental exertion, in unbecoming conviviality, in degrading debauchery, or, what is perhaps worse than either, at the gaming table. Yet, notwithstanding the sensibility of his nature, his taste for various elegant accomplishments, and his warm affections, Dr. Bateman's manner was, from his extreme reserve, what might appear inconsistently cold: but this is by no means unusual: the very sensibility of some persons creates an exterior coldness; and plain, simple-minded, and strictly honest men, like Dr. Bateman, are often quite unable to acquire a warmth of manner correspondent to that warmth of the affections which shrinks from expression as from display. His success in practice, which was considerable, was therefore entirely owing to his talents and knowledge, without much aid from exterior recommendations, about which he was never solicitous. In mentioning these particulars, the biographer makes this very just and important observation.

‘There is only one proper object for the physician to set before him, and that is a great and very serious one—to learn all he can, and to do all he can, for the good and the comfort of the sick and the miserable. This is quite enough for his attention; and whatever contributes, directly or indirectly, to this accomplishment, it will be inexpressibly a satisfaction to him to have striven for with all his might and all his strength. For the rest, it is better left; and when left, for his encouragement, he may be assured it is better adjusted.’—P. 94.

It is not to be understood from these sentiments, or from

any thing that we have expressed by way of introducing them, that manner is to be overlooked, or that any accomplishment is to be wilfully neglected. A physician is, or ought to be, a gentleman, and fit for the society of his equals at least, if not of his superiors. Even Dr. Bateman's success, although steadily progressive, appears to have been retarded by the want of something of this kind.

The steadiness of his progress began, however, in 1815 to be arrested by those deplorable interruptions of health from which he was seldom afterwards wholly exempt. Disordered digestion, severe attacks of headach, and partial amaurosis, were the first penalties of the excessive mental exertion to which he had forced himself. Mercury, which was administered in the hope of relieving him, produced a lamentable aggravation of his sufferings; and he never after that time recovered perfect health.

' Could he have reconciled himself to retire a few miles into the country, and spend his summer there in entire rest, after the severe illness of 1817, it would seem now that there might have been a better hope of his life being prolonged. But an epidemic fever had then begun in London, and his zeal was not to be restrained. He recommenced his attendance at the Fever Institution in the month of April of that year; and from that time to the beginning of the following February, he spent from an hour and a half to two hours, or two and a half, daily, in the wards of that hospital, having the care there, in the course of that time, of nearly 700 patients. Such was his anxiety to watch the progress of the epidemic, that nothing could induce him to relax his labours until after all the officers and most, as it was said, of the attendants of the Institution had suffered from the contagion. He was indeed himself attacked with fever in February, and at first believed it to be the epidemic. But beginning to recover in a very few days, he was disposed then to attribute it more to the fatigue and extreme anxiety he had undergone. These had been at that time much increased by his attendance on Dr. Da Costa, a promising young physician, who, after assisting him a few weeks in the Institution, for the sake of becoming acquainted with his practice there, fell a sacrifice to the contagion. From the effects which Dr. Bateman experienced from fatigue ever after 1816, it is probable he was right in his conclusion. But however this might be, he never recovered any tolerable degree of strength, but went on rather declining than improving, until, in July 1819, he was taken ill on his road from London to Middleton, in Durham, whither he was proceeding for the benefit of the sulphureous water of that place, and with difficulty reached Bishop Burton, a village near Beverley, in Yorkshire, the abode of a near relative.'—P. 116.

At last, in 1818, Dr. Bateman's continued bad health compelled him to resign his situation of physician to the Fever

Institution. He then published his well-known and very able little work on the subject of the epidemic ; collected his Reports, and published them, with a prefatory sketch of the State of Health in London at different periods during the last century ; and for a time struggled against the advances of the malady which gradually removed him from all the business of life, and eventually from life itself. In the interval between his separation from all objects of worldly ambition* and his death, his thoughts underwent so material a change on the subject of religion, that his friends have thought it right to give an account of it to the public, and this account is inserted also in the *Life*. He had long been subject to alarming languors, which had latterly increased to such a degree, as to make him fear that the effort of walking across the room might be fatal : on these symptoms had supervened a variety of nervous feelings, which were productive of indescribable distress. It was on one of the days in which he had suffered more than usual in this way, that he first spoke to those around him, whose serious opinions he well knew, on the subject of religion. Previous to this time, partly from continual occupation, and from the zeal with which his studies, or his practical duties, had been performed, he seemed to have found no time to examine into the soundness of certain opinions imbibed by him, it would appear at some period of his study, which leaned to materialism. If the doctrines of materialism be really common among medical men (which we take the liberty to doubt), they are surely with little appearance of justice ascribed to their peculiar studies. The inadequacy of anatomy, however minute—of physiology, however exact and perspicuous—to explain the phenomena of mind and of life, are, we think, of all ideas those which are most constantly present to the student of these interesting sciences. As far as our own experience goes, the opinions of the materialists, if brought into the dissecting room, are chiefly introduced by men whose influence is limited to perverting the minds of a few uninformed boys who are in haste to be philosophers, and who think it highly philosophical to reject with disdain what their elders accept with humility and deference. If among the seniors of the profession there be many well-known and professed materialists (which, from any thing within our own knowledge, we are far from asserting), we are inclined to think they will be found to be men who have been zealous prosecutors of science, and successful followers of practice, but who have

* We believe this is correctly stated ; but the dates in the *Life* are very imperfect.

never really examined the state of their feelings regarding any subject of a serious nature; who have never stopped in their course of ambition to inquire into the origin of the innate hopes and fears which, like other men, they must have felt on the subject of a future state of existence; and who have never yet considered the proceedings of the moral world with sufficient calmness to see; that if they are all to end here, there is in them a folly, an emptiness, and an inutility, which are contrasted with all that we behold in the natural world, and with all the other indications we have of the wisdom and design of the Great Power by which all things were created. That medical men are generally remarkable for an indifference and coldness on religious subjects, is undeniable; but they are equally so (still speaking generally) on subjects of a political nature; and the cause of the indifference is in both cases the same: they are engrossed by other matters, and in these ignorant; their attention must be given to other subjects—these they have never had time to examine; they are busy with facts, and know the difficulty of reaching them; they are taught to condemn excessive faith in all the branches of their peculiar science, and they apply the lesson to a subject where worldly proof was perhaps intended always to be deficient, that faith might be exercised. Unquestionably, also, for some time after the French Revolution, to profess what are called free principles in religion and politics was considered the mark of a mind highly enlightened, and superior to vulgar prejudice; and all who were believers in the Christian faith, or heartily attached to a monarchical form of government, were looked down upon by the philosophers of the day as miserable wretches, of the meanest capacity and the most contemptible sentiments. We are old enough to have felt a little of this juvenile expansion of heart and intellect, and to remember men whose republican tenets were thought to include every idea of virtue, and whose enthusiastical opinions were considered proofs of the sublimity to which an unfettered mind could attain. Further experience unfolded to us the real principles of such persons, or rather the very remarkable incorrectness of moral feeling on some point or other in all of them. The days of which we speak, and the busy spirits of that time, have passed away: an era of better feeling, and of sounder philosophy, has arrived, in which, fortunately for those who are yet students, opinions very different, and feelings better regulated, have all the worldly sanction of station, and power, and, above all, of high and surpassing intellect. We mention one observation more, which merely relates to a fact to which we give our testimony after the most considerate recollection,—that of the students

or practitioners whom we have known, (and we have reason to believe our acquaintance with both was, and is, as extensive as happens to most individuals,) those who have treated religion lightly, or have secretly entertained the opinions of the materialists, have been the least distinguished by attainment, or the faculty of attainment; the least habituated to the close and impartial investigation of truth:—whilst those who, though with various shades of opinion, still thought most seriously on religious subjects, have been those most eminent for talent, and the most distinguished for acquirement, both medical and general.

Dr. Bateman's infidelity, if we can properly call that infidelity which arises from never having considered the opinions which are rejected, appears most evidently to have been occasioned by his never having looked into the subject of religious faith at all. He acknowledged that it had been his intention to examine the subject fully, when the complaint in his eyes came on, and shut him out from reading. It appeared, indeed, quite new to him; for on having read to him an *Essay on the Divine Inspiration of the Scriptures*, to which he listened with intense earnestness, he exclaimed, 'This is demonstration! complete demonstration!' and from this time never lost his interest in the subject. The doctrine of instantaneous conversion is far too delicate for us to presume to treat of: that a belief in it is often dangerous, cannot be doubted; but to deny that there have been instances of it, would be to deny authority which we should not be justified in calling in question. That many supposed examples of it are to be accounted for by the supposition of the accidental excitement of an ardent mind beyond the bounds of rationality, seems obvious from the narratives in which they have been given to the world; but other examples do not admit of such an explanation. Thus, it may be contended that the extraordinary sense of divine mercy which so highly animated the mind of Dr. Bateman for some days after the occurrence we have just spoken of; the alternation of this with despondency and despair of salvation; his being at that time confined to his bed by an imaginary want of power to walk (which was proved by his being able to get up, when he was told by a friend that he only wanted resolution to do so), and his subsequent silence on religious topics, are all proofs that his mind was not at the time of his conversion in a sound and healthy state. But it must not be forgotten, that the *effects* of this change of feeling were invariably manifested in him from that time; that he became regular in his attendance on public worship, and was deeply interested in it; that his pursuits were in many respects altered; and in others

evidently animated by a sense of duty arising from higher motives than he had ever known before. The even and consistent tenour of his conversations up to the time of his death; the continual proofs he gave his friends that his understanding was clear and unclouded on all subjects, as well as constant in this; the perseverance with which he applied his mind, during the short interval of amendment which he enjoyed between his conversion and his death, to the investigation of religion, 'pursuing it, as he would have done any other science, with minute and cautious examination, though with all his characteristic ardour;' and this too from a settled and quiet conviction of its inestimable importance; and at a time (during the last winter of his life) when he practised his profession, although in a sphere more limited than that to which he had been accustomed, with all his wonted acuteness and zeal,—are surely circumstances more than sufficient to 'silence the gainsayer and the disputer of this world.'

On this subject, we may be considered as having said more than enough. As connected, however, with the medical character, it does not appear to us to be at all below the consideration of any man engaged in our profession. For a far more complete and masterly view of the whole subject, we refer the reader to the pages of the work which is the subject of this article. In many points, chiefly perhaps relating to *expression*, we certainly differ from the biographer of Dr. Bateman; but we cannot withhold from him our praise for candour, moderation, and a truly Christian spirit,—to say nothing of the great ability with which the subject in all its bearings is treated by him. To return to considerations of a more common kind; several interesting particulars are contained in the following extract:—

'By his friends, in the profession and out of it, Dr. Bateman was held in uniform and high regard. It was not the admiration of talent alone which sustained so permanent and so strong a feeling. They knew likewise, and valued, the sincere and steady sentiments of attachment by which he was himself actuated. In the ordinary intercourse of society, his varied attainments and simplicity of manner rendered him an acceptable companion. His unimpeached integrity was a still more solid ground for that confidence on which alone more intimate acquaintance can satisfactorily rest.'

'As a member of the public polity, his opinions were in favour of the existing order and constitution of the state, and on the side of the government of his country. These he would support with much animation and force of reasoning, occasionally enlivening the argument with sallies of humour and raillery. But political differences never led him to personal estrangement; nor did his zeal for what he considered the public good lessen his warmth of private friendship.

'The extraordinary diligence with which he pursued his studies has been already noticed, as well as the unwearied assiduity which he afterward displayed, and which gave the character and impress of utility to all he undertook. His early and habitual love of study had stored his mind with all that ancient and modern medicine could provide of any useful purport. He was well qualified, therefore, for the task on which he entered, of writing the medical articles for the Cyclopædia. But although his mind was so thoroughly prepared, and that he composed with such facility, he omitted no means to render himself more perfectly familiar with his subject before he committed his thoughts to paper; *Nil actum reputans, dum quid superesset agendum.*'—P. 206.

With reference to the last observation, it may be mentioned, that Dr. Bateman said, that to prepare for the single article *Imagination*, of which he wrote the medical portion for Dr. Rees's Cyclopædia, he read the greater part of one-and-twenty volumes.

In the summer of 1820, an unexpected amendment took place in the state of his health; and he had made up his mind to reside and practice at York. This design he was never able to accomplish; he found his debility fast increasing; and at an age when men are generally unusually interested in all objects of worldly ambition, perhaps from their having in general by this time made a near approach towards the attainment of them, he resigned all hope or intention of further exertion,—looking upon his illness, his disappointed hopes, and his sufferings, as mercifully and wisely intended; and in this frame of mind, when a little more than forty years of age, without repining or complaint, he resigned his soul into the hands of his Maker.

'His knowledge was various and complete; his humanity always active; his love of truth, moral as well as philosophical, remarkable throughout his history. These are within the comprehension of all; and to do less than seek an equal advancement in whatever belongs to our own duties, will be to incur, be our outward success for a time what it may, a reproach from conscience, which can never be put to rest. With a like care to obey that conscience from its earliest dictates to its latest, life may be in like manner crowned with usefulness and honour; and death may be met with the same peace, and thankfulness, and hope, and joy.'—P. 227.

Thus concludes his biographer,—and it only remains for us to say, that this Account of the Life and Character of Dr. Bateman will prove interesting not only to all who wish to be eminent and useful in the profession and in their generation; but to all who take any pleasure in watching the formation, or tracing the development, of the human character. The remarks scattered over the work on the subject

of education are of the highest value; and a dissertation on true poetry, beginning at page 66, though perhaps a little oddly introduced, is written with great feeling and power. The pervading spirit of the whole work is that of genuine and unaffected piety; and we most sincerely hope that the labours of the excellent author will not have been in vain.

II.

ON THE PATHOLOGY OF MELANOSIS.

A Case of Melanosis; with general Observations on the Pathology of this interesting Disease. By THOMAS FAWDINGTON, Member of the Royal College of Surgeons in London, and one of the Surgeons to the Manchester Lying-in Hospital. London. Pp. 49. Coloured Lithographic Plates.

THIS work affords us an opportunity of laying before our readers the subject of melanosis,—a disease of which we can at present be said to know only the existence. With the circumstances under which it is produced, the laws by which it is governed, or the symptoms by which it is indicated, we have very little acquaintance.

The term *melanosis* has been employed by Bayle, and since him by every other writer who has treated upon the disease, to signify an affection in which a peculiar black matter is spread through the different structures of the body. It exists either in a diffused state or in cysts; and there is not a single part of the corporeal system in which it has not been found. The nervous fabric appears to have been the most, perhaps entirely, exempt, since in none of the cases that have been reported do we find the nerves mentioned as having been affected. In the first dissection related by Messrs. Cullen and Carswell, we are told that the ‘nerves were seen sometimes running over the surface, sometimes traversing in the very substance of the black masses, but they had undergone no kind of alteration;’ and in the instance reported by Mr. Fawdington, it is said ‘that no traces of the disease could be distinguished in the nervous textures submitted to examination, viz. the sympathetic and semilunar ganglia, and the trunks of the anterior crural and great sciatic nerves.’

From the investigations that have hitherto been made, it seems permitted us to assert, that it is altogether an additional formation, and that it never takes the place of healthy structure. This fact appears proved equally by Bayle, Laennec, Cullen and Carswell, and by Mr. Fawdington. The description most carefully drawn up on this part of the

subject is that of Messrs. Cullen and Carswell, in whose inquiries it seems to have been peculiarly attended to. The language employed by these gentlemen is so precise, that we gladly copy it. 'Again, we have seen no example where it could be truly affirmed that the textures of the body had undergone any alteration in consequence of the ravages of the disease. The bones, for instance, were of a deep black colour; but otherwise unaltered. The muscles had their fibres separated by the tumours; but the fibres themselves were entire, and possessed their natural colour and tenacity. The parenchymatous viscera were not altered in texture; the substance adjacent to the cyst was as healthy as the rest of the organ.' The case reported by Mr. Fawdington appears to render the last assertion somewhat doubtful; for he states that 'the intermediate spaces in the liver shewed little of the natural hepatic texture, and that it was remarkably tender and lacerable.' As, however, this might have occurred from the more general interstitial deposition of the melanose matter than has been observed in any other case hitherto recorded, it does not seem to us to overturn the opinion of the former authors.

The manner in which this black matter is deposited has been rather variously related. Bayle has reported its existence, if we are not mistaken, only in the lungs; and has not noticed the encysted form. Laennec describes four forms, viz. the encysted, the non-encysted, the impregnating, or infiltrated into the natural structure of an organ, and the laminated, or deposited on the surface of an organ. Cullen and Carswell describe it as always contained in cysts. Breschet describes the two first and last forms of Laennec; and Fawdington's case confirms the description of the last pathologist.

The melanose matter itself when contained in cysts exhibits very different degrees of consistency. It is sometimes liquid, sometimes pultaceous, at others hard, concrete, and laminated. By Breschet it is stated to be inodorous, and to consist of the same principles with the coagulum of the blood, excepting that the colouring matter seems to have undergone some alteration. Upon the whole, however, the account of the peculiar matter of melanosis given by Mr. Fawdington is the most accurate and comprehensive.

'On inspecting more closely the product of melanosis, it was found to possess an appearance very similar to that which the contents of a decaying lycopodon, or common puff-ball, would present, if rendered cohesive by the addition of a small proportion of liquid. It had a deep red brown, or chocolate colour; was slightly fibrous in texture, and when agitated in water or spirit, and suffered after-

wards to rest, a part fell down, as a pulverulent sediment, having the colour and opacity described. The water received a deep tinge from it; the spirit was hardly coloured. The substance in its most compact form shewed a tenacity equal to that of the brain; and yielded by expression a small portion of a reddish fluid, intermixed with fragments of the texture alluded to; but it had become reduced to a thin, blackish, or red-brown paste, where the softening was completed. The softening was most decided in the centre of the largest tubera; and in these the inner circumference of the cysts was fringed with flocculi of the melanose material, which were connected with it by means of a very fine cellular tissue; and this latter formed the bond of union between the cysts and its contents under all circumstances. By the same medium, the external surface of the cysts was united to the parts in which they were situated, and thence in a general way admitted of being easily detached. The cysts did not present the slightest trace of vascularity, nor was there any visible turgescence in the vessels of the enclosing textures. M. Breschet has been at some pains to ascertain whether the melanose tubercle was truly organised; and with this view he threw into the veins and arteries of the contiguous parts some of the finest and most diffusible injections, without discovering any continuity of vessel between the cyst and the substance it contained, or any organisation in the latter. He states the results of his experiments in these words, "*Mon injection n'a fait que dénoncer des vaisseaux sur la membrane d'enveloppe, et quelquefois il s'en est épanché dans la cavité qui s'est mêlée à la substance morbide.*"

From an analysis which he made of it, M. Barruel, a French chemist, thinks that the substance of the tumours in melanosis is a deposition of the colouring matter of the blood, and of fibrine, each under a particular modification, and forming three different fatty substances. The first soluble in alcohol, at a moderate temperature, and disposed to crystallise in brilliant scales; the second is soluble in alcohol, at a boiling heat only; the third is a fatty substance in a fluid state at the ordinary temperature of the air, of a reddish colour, containing a large portion of the phosphates of lime and iron.

From a portion of the softened matter, after it had been kept some time in spirit, Dr. Henry obtained the following results, which, through his politeness, I am enabled to give in his own words.

1st.—By filtering through paper much of the colouring matter remained on the paper; and the colour of what passed through was much less intense.

2d.—Boiling does not destroy the colour, nor even when a little caustic potash has been added.

3d.—It is not changed by acids even when heated, except by nitric acid, which deprives it of its black colour, and turns it yellow.

4th.—A stream of chlorine passed through the liquid destroys its black colour, and throws down light, fawn-coloured flocculi.

' 5th.—A few grains of corrosive sublimate stirred up with the fluid precipitates the whole of the colouring matter, and leaves the supernatant liquid quite clear.

' 6th and 7th.—Nitrate of mercury and muriate of tin produce the same effect, but more slowly.

' From these experiments it appears, that the black matter is a peculiar secretion, analogous in some properties, especially in the 5th, 6th, and 7th, to the colouring matter of the blood. It would be necessary, however, to repeat and extend the experiments on a larger quantity of the fluid, and in a more recent state, before any just conclusion can be deduced respecting its nature.'

The opinions respecting the nature of melanosis are exceedingly discrepant. By Messrs. Cullen and Carswell it is regarded 'as a perfectly innoxious secretion' (we employ their own language), although their own cases appear to us incompatible with the opinion. Laennec speaks of it as the worst kind of cancer. Mr. Wardrop, according to Mr. Fawcington, for we have not that gentleman's edition of Baillie's works by us, considers it as at least analogous to fungus hæmatodes, and states 'that he has observed the disease pursuing uniformly the same course, and undergoing the same process of disorganisation.' M. Breschet has mentioned the cysts as the only organised part of the tumour,—while Mr. Fawcington is unwilling to believe that the black matter itself is a mere secretion. 'I am inclined,' he says, 'to believe that this substance is a true creation, and not extraneous, as the matter of a tubercular gland; that it is not beyond the pale of a vital influence, but possesses, like many other tumours, an inherent power of growth, controlled by laws as yet mysterious and unintelligible, somewhat different perhaps from those which prevail over such diseases as present an unequivocal vascularity, and hence maintain a more dependent relation to, and intimate connexion with, the surrounding structures.'

With respect, again, to the progress of the melanose tumours we seem equally uncertain. Laennec describes them as undergoing a softening process; while the authors of the paper in the Edinburgh Medico-Chirurgical Transactions suggest 'that what he calls ramollissement is nothing more than melanosis originally secreted in a more fluid form than common.' The case reported by Mr. Fawcington, however, seems corroborative of Laennec's opinion. When first seen, on the 2d of October, a tumour was perceived to occupy the abdominal cavity. It had at this time an irregular, tuberculated feel, and was firm and unyielding over the principal extent of its surface; but the prominences of the supposed tubera possessed a slight degree of elasticity. When

examined again, on the 29th of the same month, the liver had become so much softened as to induce suspicion of an abscess; and on examination, after death, a large tumour, projecting beyond the rest, was found immediately correspondent to the point of observation. It is true, that this occurrence may be differently explained, but scarcely we think so naturally as upon the supposition that softening had occurred. Were we to admit the reasoning of Messrs. Cullen, &c. that if softening happened we should expect the larger the mass the less consistence it would possess, Mr. Fawcington's case will again bear out Laennec's opinion; for he states, decidedly, 'that the degree of fluidity, which was most elaborated in the centre, seemed to hold a nearly direct relation to the compass of those cysts.' But we cannot see the force of the reasoning of these authors, even though it has been admitted by Dr. Good, because it is contrary to fact, in that species of tumour which is certainly subjected to ramollissement; viz. the common scrofulous tubercle. There is no relation between the volume of these tumours and the fluidity of the contents; for, as it must be well known to every one who has paid but slight attention to their progress, they sometimes attain a great size without any fluctuation being perceptible, while, at other times, the smallest tumours are perfectly soft, having none but fluid contents. The subject must, however, be still regarded as *sub judice*, and can only be answered satisfactorily by observing the progress of those melanose tumours that occasionally are found in the skin.

The indications of melanosis are so little certain, that we may be considered as at present entirely unacquainted with them. There is no one symptom by which a pathologist could be led to suspect this peculiar disorganisation, if melanose tumours have not formed under the skin.

The earlier cases that are recorded of this malady by Bayle were confined to the lungs, and he has termed them instances of consumption with melanosis. Their general course, as described by him, exhibited slow, but persevering emaciation, with a pulse slightly quickened, and continually increasing debility. In the first case, the individual had been subject to cough and expectoration for many years. The expectorated matter was white and opaque; he became more and more emaciated, and more feeble; his appetite being very good the whole time. His friends regarded him as only suffering under the effects of old age, and were actually proposing to remove him to *un hospice de vieillards*, when he was suddenly seized with low fever, and died in three days. The lungs, in this instance, exhibited no tubercles. There were some empty cavities lined by a membrane secreting pus, and

the walls of the cavities presented round apertures. The neighbouring portions of the lungs were very black, and the bronchial ramifications contained white purulent matter. This case appears to have been of long duration, and death ensued from mere exhaustion.

The subject of the second case had likewise been very long subject to cough and expectoration. About six months before his death his legs swelled, and the swelling gradually extended to the abdomen. Tympanitis and abdominal pains ensued, the cough and expectoration became worse, and were attended with great debility. The pulse was neither frequent nor hard. He does not appear to have suffered from hectic fever. A few days before his death the abdomen became very painful, and the pain was augmented by pressure. No particular account is given of the circumstances of his death. There were tubercles in the lungs, and the surrounding pulmonary tissue was black and hard. About an inch from the cardiac orifice, and in the lesser curvature of the stomach, *there was a cancerous tumour in a state of ulceration.* The coats of the stomach, in this part, were thicker than usual, and were interspersed with small bodies of various forms, some opaque, others transparent, and of a *bluish-black colour.* The peritoneal coat was covered with a thin layer of albumen, and in many parts there were deep black patches.

One of the cases related by Laennec exactly resembled the last case of Bayle, both in the symptoms and the dissection. The case is thus given by Dr. Forbes, in his Translation of Laennec's work.—‘A man, sixty years of age, died, after having laboured under cough and expectoration, and other symptoms more or less allied to consumption, but not well marking this disease. For several weeks there were swelling and fluctuation of the abdomen.’

The other case reported in the same work exhibited somewhat different symptoms. There was the same prostration of strength as in the former instances, with cough and dyspnoea, but melanose tumours found externally under the skin, and the pulse was extremely quick. This case seems to have run its course more rapidly than the others; but the exact time is not specified. Laennec has attempted to lay down the peculiar symptoms of melanosis; but it will be evident, from his own language, that he considered the diagnosis as very difficult, if not impossible, under our present limited knowledge of the disease.

‘Melanosis,’ he observes, ‘like all other accidental productions which differ from the natural tissues of the animal economy, gives rise to constitutional and local disorder. Among the constitutional or general effects are the gradual

diminution of the vital powers, and a marked change in the process of nutrition, whence result emaciation to a considerable degree, and dropsy of the cellular membrane, and sometimes of the serous membranes. The subjects whom I have known to die in consequence of melanosis in any organ had no continuous or well-marked fever; and this is true of cases wherein the disease extended to a great portion of the lungs, and is also observable in the two cases given of the same affection in the work of M. Bayle. If this circumstance holds good generally, as I am much disposed to believe, it will assist in enabling us to distinguish, during life, consumption produced by melanosis of the lungs from that depending on tubercles, which last, as is well known, is accompanied, almost through its whole course, by a hectic, which is usually characterised by two exacerbations,—one towards mid-day, and the other in the night.’ On turning to the cases given by MM. Cullen and Carswell, we have yet a different assemblage of symptoms.

In the instance of John Houlston the symptoms were those of severe pleurisy, and he was treated in the usual manner. The disease appears to have commenced about the middle of March, and the acute symptoms had been subdued by the 23d. On the 28th, a hæmorrhoidal affection supervened, which yielded to the application of leeches. On the 1st of April he complained only of weakness, but died in the night.

It is probable that the disease had existed longer than would appear from the hospital register, for the year previously one eye had been extirpated on account of the pain and headach with which the affection of the organ was attended. It is sufficient to state here, that the situation of the vitreous humour was found after the operation to be ‘completely occupied by a black-looking fibrous mass, pushing the choroid coat and retina into the posterior chamber.’ The melanose matter was diffused most extensively over the whole internal organs of Houlston, ‘upwards of three pounds of fluid were formed in the cavities of the pleura, and there was a thin pellicle of albuminous matter covering the surface of the lungs.’

The other case, related by the same authors, was attended with shooting pains in the loins and in the upper and lower extremities. She became tympanitic, and there was a moveable tumour perceptible in the iliac and hypogastric regions. She was liable to paroxysms of dyspnœa and febrile attacks, which yet do not appear to have presented the precise character of hectic. Emaciation and debility rapidly progressed, and a few days before her death there was decided hectic fever. There were several small painful tumours discovered

on the integuments of the abdomen, towards the termination of her illness.

The last case we shall notice is that related by Mr. Fawdington. In some respects it bears a resemblance to Houlston's, inasmuch as it plainly originated, like his disease, in the ball of the eye; but in no other instance on record was the matter so universally diffused.

The patient, Thomas Pecket, was first seen by Mr. Wilson, in January 1824, on account of an affection in the right eye.

‘ Six months previous to his application, he received a blow upon the organ from the projection of a small piece of iron; but the injury appeared to be of a very trifling nature, as he experienced but little pain; nor did the eye exhibit any external appearance which attracted the notice of those around him.

‘ About a fortnight after this accident he experienced a sensation of fulness in the globe, and upon shutting his right eye discovered that the sight in the left was very imperfect. The pain and dimness gradually increased; the former to a most distressing degree, chiefly affecting the ball of the eye and margin of the orbit. By antiphlogistic treatment the pain was removed, but without any amendment of vision. At the latter end of March, he again applied to me, on account of a return of pain. He stated that a few days after he returned home he had experienced his former sensations, and the pain was now so violent and incessant as to prevent him sleeping.

‘ The disease had made considerable progress, and it was to be feared that the pain he endured was owing to a morbid growth in the globe of the eye. The sclerotic coat at the upper part of the globe, and towards the internal canthus, was reduced to an extreme tenuity, the choroid covering the protruded substance. The opaque appearance in the pupil had assumed a dirty red colour, resembling newly organised lymph, and this seemed to be the apex of a conical-shaped body, situated deep in the bottom of the eye. The former treatment, with moderate ptialism, was ineffectually adopted, and on the 19th of April I removed the contents of the orbit.

‘ A section of the eye-ball discovered a black, pultaceous tumour, occupying more than one-half the interior of the globe, in the situation of the vitreous humour, of which last-named part no trace could be discovered.

‘ He recovered from the effects of the operation, and returned home at the end of a month apparently well.

‘ In the month of August he again applied to me on account of three or four tumours on the face, about the size of a leaden shot, perfectly black in colour, but unattended by pain or uneasiness. He complained of difficulty of breathing, and of stitches in his side, with a short cough. He had evidently wasted in flesh, and his pulse was quick, and remarkably sharp. A tumour similar to those on the face was discovered upon the skin of the back, in the space between the scapulæ. In a few days, one or two more were found

upon the scalp. He was bled freely from the arm, and sent to the Manchester infirmary, where he was placed under the care of Dr. Horne.'

On the 2d of October he came under Mr. Fawdington's observation. At this time he was exsanguine, and his legs were œdematous. The abdomen was enlarged by a tumour 'reaching from the right to the left side, and down to within an inch and a half of the pubes, where its margin can be distinctly traced.' There was little pain on pressure, but wandering pains both in the chest and abdomen were frequent. He had difficulty of breathing, which seemed, however, principally owing to the mechanical pressure of the tumour. The appetite was unimpaired, and there was diarrhœa, but the dejections were sufficiently bilious, and by no means ill digested. 'The secretion of urine was remarkably scanty, and this fluid presented a very peculiar appearance. When emitted it has a purple colour; but by allowing it to stand a few hours, a chocolate-coloured precipitate forms, leaving the supernatant fluid of a deep amber hue. Neither heat nor the nitric acid produces any visible change upon it.'

The constitutional irritation, which was at first slight, gradually became more marked, hectic fever was established, respiration became more difficult, and he died rather suddenly on the 3d of November. Without entering into the particulars of the dissection, it will suffice to observe, that there was not a single viscus of the trunk free from the melanose matter. Examination of the brain was unfortunately not permitted.

In addition to the progress of the disease of which a knowledge is afforded us by the above cases, ulceration sometimes occurs in the tumours that form upon the skin. Messrs. Cullen and Carswell have noticed the appearance of this ulceration in the body of a woman brought into the Pairs of the School of Medicine in Paris for dissection; but nothing appears to have been known of the history of the case.

Other cases of this malady have been recorded, but none materially differing from those already given.

We may now say that we have told all that is known respecting this very obscure disease. It will be manifest that the symptoms are nothing different from those which accompany all chronic diseases, and that unless the melanose tumours are present in the skin, there is no peculiar symptom by which we might be induced to suspect this particular mode of disorganisation. Under this ignorance of symptoms, and, as we have already shewn, of the nature of the disease, it would be worse than idle to lay down any plan of treat-

ment; we can only alleviate symptoms as they occur; we cannot hope to cure till we become better acquainted with the nature of the affection.

The account we have now given is in truth all that is known respecting melanosis, and we have preferred relating it in its nakedness, to any orderly dissertation upon its diagnosis, prognosis, and treatment. Every thing is yet to be learnt regarding it; and our principal object in presenting the subject to our readers on the present occasion has been to excite a more general attention to the disease. Let it, therefore, be remembered, that we are not only ignorant of the proper mode of treating it, but that we know not even what symptoms will enable us to recognise it. It is completely a *terra incognita* in medicine, and few will deserve better of mankind than he who shall teach us to anticipate its ravages, and to palliate the sufferings it inflicts.

III.

ON DIPHTHERITIS.

Des Inflammations Spéciales du Tissu Muqueux, et en particulier de la Diphthérie, ou Inflammation Pelliculaire connue sous le nom de Croup, d'Angine Maligne, d'Angine Gangréneuse, &c. Par P. BRETONNEAU, Médecin-en-Chef de l'Hôpital de Tours. A Paris. Crevot. 1826. 8vo. pp. 540.

Of the Special Inflammations of the Mucous Tissue, and particularly of Diphtheritis, or Pellicular Inflammation, commonly called Croup, Angina Maligna, Gangrenous Angina, &c. By P. BRETONNEAU, Chief Physician to the Hospital at Tours. Paris. Crevot. 1826.

IN the latter part of 1818, a form of malady appeared at Tours, which, although by no means new or previously unobserved by medical authors, prevailed to such an extent, was so little understood in the beginning, and was attended with such alarming fatality, as to attract the most serious attention of the practitioners of that city. An immense number of young persons fell victims to this disorder: in some families four or five children died of it, one after another, in a very short space of time: it seemed for a time to disappear, and returned more than once: six years after it was first noticed at Tours, it prevailed at La Ferrière, in the same department, and destroyed eighteen patients out of twenty-one, who were attacked with it, in a population of 250 souls: even at this time, although rarely, cases of it are met with:—all these circumstances give a particular interest to the careful descriptions now given by M. Bretonneau, an eminent physician at

Tours, who seems to have given to this subject the most persevering attention; and whose work, both as a descriptive and practical book, is highly honourable to his talents and to his diligence.

The arrangement of the work is defective and highly inconvenient. The reader has to contend with three successive memoirs on the same subject, in the form in which they were read to the Academy, and each illustrated and 'justified' by subsequent additions: every division of the subject, consequently, is treated of in two or three different parts of the book; and not only frequent repetitions, but occasional contradictions are thus occasioned. Disregarding this arrangement as much as is consistent with a fair representation of the contents, we shall endeavour to give a clear account of the subjects treated of, and particularly a description of the disease and of the treatment proper for it.

For practical purposes it would perhaps have been better if M. Bretonneau had been content to limit himself to this plan; but he conceived, in the progress of his observations, that he was able to establish the identity of three diseases,—scorbutic gangrene of the gums, angina maligna, and croup; and to these he thought it convenient to give the general name of diphtheritis, or pellicular inflammation of the mucous membrane. We confess that we do not see sufficient ground for this generalisation. The first disease, scorbutic gangrene of the gums, appeared first in order, was confined for the most part, if not wholly, to the western barracks, where the Vendean regiment was stationed, was only noticed in adults, was apparently propagated, in a great measure, by the soldiers drinking out of the same cups, was readily cured by the local application of muriatic acid, and wholly disappeared when the regiment was removed. The second disease, or angina maligna, we think we shall be able to shew was never seen at all. The third, or croup, but croup singularly modified, constituted the fatal, long-prevailing, and hardly yet extinct epidemic, chiefly attacking children and young persons; yielding in some instances to local treatment, but productive of the most awful destruction of human life in numerous families, until recourse was had to a plan of treatment of which, for several reasons, we shall speak more fully by and by.

The disease which M. Bretonneau has designated scorbutic gangrene of the gums made its appearance among the soldiers of the Vendean regiment, who had been previously healthy, and were at the time when the disease prevailed exposed to no circumstances which seemed to account for it. The malady was the true stomacace, the condition of the gums

and lining of the mouth and cheeks being precisely that which is described by all writers on scorbutus. At the same time, the skin was not affected, and M. Bretonneau very rightly refuses to call the complaint scorbutus; but we think the *first* step of his erroneous generalisation of this affection with angina maligna, and of both with croup, is to be traced to the readiness with which he affixed the name of angina maligna to those cases in which the tonsils were affected before the gums were so. It would be idle to dispute this point at any length. The *second* step is one for which it seems to us M. Bretonneau had much less justification. Towards the end of the same year some cases occurred in which the throat alone was affected, or at least in which the gums did not participate in the affection, and when, if any extension of the disease of the throat existed in the larynx, it was not yet suspected. It is probable, however, that these were really the first cases of the epidemic modified croup which will presently be described: but to demonstrate what we conceive to be M. Bretonneau's error with respect to them, we must insert the first case of this kind contained in his work.

' November 1818. A child of five years of age, healthy, and well formed. Coryza; severe pain of ears, relieved by a serous discharge. Within the last two days, slight pain of the throat: deglutition is so little impeded, that the child took its supper last night with its parents, and with its usual appetite. The third day, neck more affected: the fauces examined at eleven in the morning, the amygdalæ were covered with large gray spots, having a red and tumid base.

' Eight leeches were applied to the sides of the neck, and bled copiously: the kermes mineral was given repeatedly in such doses as produced vomiting.

' Hoarse cough, altered sound of the voice: in the evening, aphonia, excessive fœtor of the breath, blackish-gray tint of the eschars, which are extended over the whole of the pharynx; pulse small and frequent; dyspnœa, livid paleness: the child died in the night.'—P. 19.

M. Bretonneau considered it quite evident that the death of this child was occasioned by *gangrene* of the fauces, and on this point seems to rest the whole matter of the *angina maligna*. Pre-occupied with this idea, and obliged to make his *post mortem* examination of this case in the presence of the afflicted parents, he made the following note of the dissection:—

' *External appearance.*—Embonpoint; livid paleness; tumefaction of the lateral parts of the neck.

' *Examination eight hours after death.*—The velum of the palate

is of a blackish-gray colour as high as the palatine arch; the putrid decomposition of the surface of the amygdalæ appears yet more advanced; the eschars extend from the guttural opening of the nasal fossæ as far as the commencement of the œsophagus; they penetrate into the glottis, where they take a dull white colour. Their circumference is marked by a bright red colour. The mucous membrane of the trachea offers no trace of inflammation: a small quantity of mucus is accumulated near the bifurcation of the bronchii. This gangrenous alteration, which has spread with such rapidity, has made so little progress in depth, that the velum, when cut through, presents the appearance of a red streak between two gray lines, which are quite superficial. The fœtor which had been exhaled during life was not perceived after death.'—P. 19.

A careful consideration of these circumstances naturally led to doubt in the mind of this intelligent physician. Subsequent opportunities led to the conviction that he had been deceived by pre-supposing a *gangrenous* affection to exist, and he acknowledges this with praiseworthy candour: but it is singular, that, instead of looking upon this and similar cases as incipient examples of that modified croup which he subsequently so well describes, he should continue to regard them as cases of angina maligna, and of course should represent angina maligna and croup as one and the same affection. The insertion of another case will, we think, set this matter quite at rest. We pass over one in which the supposed eschars very readily came away on being touched with the muriatic acid, the child dying afterwards, as it appeared, from too early a discontinuance of this application, and the fauces being found healthy after death.

'A child of seven years. (*Case 3.*) General hospital. Ward, No. 4. Sore throat, with slight fever: the right tonsil a little tumefied, and upon it a white spot, which disappeared after two applications of the muriatic acid diluted with two parts of honey.

Four days passed over without any apparent alteration of the child's health; and the little patient concealed the return of the sore throat from dread of the application of the acid. The difficulty of swallowing, however, became so great that it could not be concealed. The pharynx was again examined, and all the back part of the mouth was found to be of a gray or marble colour: there was frequent cough, and abundant expectoration.

'The topical application was renewed. The following day, the tone of the voice was altered; and after the next day there was complete aphonia: hoarse cough; dyspnœa; whistling respiration; fœtid breath; livid paleness of the face. The dyspnœa increased in the night, and the child died on the morning of the third day from the relapse, when endeavouring to get out of bed to make water.'—P. 25.

M. Bretonneau confesses that he still looked upon this as

a case in which the symptoms and the fatal termination depended on the spreading of a gangrenous affection, and then describes the result of an examination after death.

' *Dissection.*—The parietes of the pharynx, as in the first case, are in appearance covered with eschars, but an unexpected difference is remarked in the trachea: a pipe, of membranous substance, white, pliable, elastic, of some consistence, adhering feebly to the mucous membrane, or rather in contact with it, extends from the orifice of the larynx to the last divisions of the bronchi. It was impossible to mistake the false membrane characteristic of croup, or to doubt that the air-passages had been the seat of that malady. Numerous conjectures arose from a more circumstantial examination. The inorganic conduit, or pipe, invaginated within the trachea, is continuous with the eschars of the pharynx, and these pretended eschars represent the broad end of a funnel, of which the tracheal pipe, or conduit, forms the stem. The surface of the false membrane in the pharynx, in contact with the mucous membrane, is neither gray nor black, like the other surface; it has the whiteness, consistence, and inorganic aspect of the concretion drawn out of the trachea and bronchi. I pass over the identity of action of divers chemical re-agents on these different portions of false membrane. What is more worthy of remark is, that when the concretions were once removed (and to do this it was only necessary to lift them up with the dissecting pincers), the parietes of the pharynx did not shew the least trace of gangrenous alteration: red spots, themselves dotted with little points of a deeper red colour, without erosion, without thickening of tissue, are the only marks of inflammation which could be observed there. The inflammatory redness was yet less distinct in the trachea.'—P. 25.

The reader of this case will hardly doubt for a moment that it was a case of modified croup. M. Bretonneau, still harassed with the irreconcilable idea of angina maligna being the first stage of the disease, with every disposition and all the requisite talent to investigate a question which soon became of serious importance, was yet some time, it would appear, before he came into this conclusion, and only effected it at last by a kind of compromise with his first opinion; admitting the croup, which was undeniable, but retaining the angina maligna, which never existed. In the mean time, the fatal cases were numerous. A great number of young subjects and some adults were carried off in a manner that might be called sudden; and in one family, near Tours, five children were carried off one after the other. In a very small number of cases the patients recovered, apparently by the application of the concentrated muriatic acid to the pharynx. Fifty-eight dissections, made in the course of two years, confirmed the evidence of that which we have just quoted, and exhibited the disease in every variety of extent, passing,

in all the cases except one, into the trachea, in many into the bronchi, in some into their extreme ramifications, and in some spreading upwards into the nasal fossæ. Two cases were met with in which the affection had spread into the œsophagus, and as far as the cardia.

To this particular inflammation of the mucous membrane, M. Bretonneau wishes to give the name of *diphtheritis*, from ΔΙΦΘΕΡΑ, *pellis, exuvium, vestis coriacea*, from whence διφθεῖρα, *corio obtego*; and he maintains that the skin is susceptible of an analogous morbid affection. As a knowledge of the minute anatomical appearances and progress of diphtheritis admits of practical application, we shall give the author's own description of them.

‘ If the most distinct diphtheritic spots are examined with a microscope, those which appear to the naked eye to be dotted with white and red, it is seen that they are occasioned by a very fine vascular injection, and that the red spots are so many little ecchymoses,—whilst the white spots are only the prominent orifices of the mucous follicles.

‘ The diphtheritic inflammation extends itself in a peculiar manner over the surface of the mucous membranes which it affects; something after the manner of a liquid which had been allowed to run over them.

‘ We often see a long narrow streak, of a deep red colour, which extends into the pharynx, or descends into the trachea, either alone or accompanied with other distinct streaks. A little band of concrete matter forms in the middle of each streak. At this period, round pores, or semi-transparent bullæ, are seen in the substance of the concretion: the dentated and thin edges of the growing pellicle are confounded with the surrounding mucus, which, without any change of appearance, is already altered in its properties, being no longer viscid, but coagulated, and ready to become concrete. Presently the little bands grow larger, become more dense and homogeneous, and, uniting, form complete tubes, consisting of a single lamina, and united with the mucous membrane by little prolongations, which penetrate the orifices of the muciparous follicles. If the concretion becomes detached, the redness is increased in the denuded points, the false membrane is reproduced, and, in proportion as the superincumbent laminæ add to its weight, it becomes more and more adherent to the organic surface. If these circumstances take place in the respiratory canals, there is probably little hope for the patient.’—P. 41.

The practical application of these curious facts is, that when long, narrow, porous bands are seen in the expectoration, when produced in abundance under the influence of mercury, it is an indication that there is no membranous pipe in the trachea, and that the disease has only recently extended into it. M. Bretonneau contends that in the disease

which he has described as the scorbutic gangrene of the gums; the affection is not gangrenous, but diphtheritic; in which case we must object to the terms in which he set out by describing it: at all events, when the malady commences in the gums, it rarely, if ever, extends to the air-passages; we say rarely, because in young subjects we are told (p. 44) that such an extension did occur; but this is the only allusion to them. On the contrary, when the tonsils are first affected, a dangerous and rapidly progressive disease is to be expected: one or two whitish spots on their surface, with tumefaction of the lymphatic glands at the angle of the jaw, are 'the characteristic symptoms of a disease which it is important to arrest at its outset, by substituting for it an inflammation of another nature.' The tumid state of the mucous membrane, or the cedematous swelling of the cellular tissue round these patches, often gives the appearance of an ulcer, and loss of substance; and the occasional detachment of a portion of them hanging down in threads, the intolerable fœtor of the breath, as well as the exsudation of blood by which they are often discoloured, all tend to deceive the practitioner, and to represent sphacelus of the affected part. A few days after the commencement of the disease, its course often seems to be checked; and though the pharynx may be extensively affected, yet when this disposition to retardation appears, there is less danger than when there is only even a small patch on the tonsils, from which it may spread in a few days, or sometimes in a few hours, to the last ramifications of the bronchi. If we understand M. Bretonneau, individuals who have once had the complaint are less liable to it than others: this, however, is not explicitly stated. It is remarkable, that when the Vendean regiment was removed from Tours, the scorbutic gangrene of the gums disappeared: this at first appears to warrant our scepticism regarding the identity of this complaint with the other cases; but the curious circumstance is, that another regiment came into the same barracks, and that although none of the soldiers of this new regiment had the affection of the gums, three severe cases occurred among them of the diphtheritic angina. Before this time, and when the Vendean soldiers were attacked in great numbers with the scorbutic gangrene of the gums, this affection was rarely observed among the citizens of Tours or the inhabitants of the neighbouring hamlet: those in the town who were so affected applied for the most part to the dentists, who cured them by applying the muriatic acid; and it is to be observed, that in no one instance was the stomacacæ of the gums and cheeks found co-existent with the angina and the affection of the air passages. One case, of a child,

was reported to M. Bretonneau by an *officer de santé* in the country, in which the fatality of an attack of croup was attributed to the child having for a few days previously had *scorbutus*. It is stated, at the same time, that some cases of true diphtheritis did occur in the Vendean regiment, in the proportion as to the affection of the gums as one to nine. M. Bretonneau has never yet seen an instance in which there was a spontaneous termination of true diphtheritis: he conceives that, in an early stage, it yields only to topical applications; and in a later, to medicines which act on the constitution. How far these views are correct, we shall consider when we speak of the treatment of this malady.

Although it may be interesting, with a view to professional literature, to ascertain by what authors a disease like that described by M. Bretonneau has been previously observed, it is not of any great importance: much of the value of the exact descriptions of the ancients is lost by their often classing separate affections under the same head: thus even Aretæus, to whom M. Bretonneau refers us, having given an exact description of diphtheritis, although in his notice of ulcers of the tonsils he has certainly described something very much like it, yet must have confounded it with real ulcerations of the tonsils, not only from his speaking of the affection under that head, but because he speaks of it as destroying the uvula, and sometimes the tonsils and the epiglottis. Notwithstanding this, we are still of opinion, that Aretæus was acquainted with this disease. In the version quoted by the author, though with some omissions, which he acknowledges, the reader will recognise many particulars of the disease in question.

‘Ulcera, in tonsillis fiunt, aliqua mitia, aliqua pestifera, necantia; pestifera autem sunt lata, cava, pingua, quodam concreto humore albo, livido, aut nigro sordentia. Quod si concreta illa sordes altius descenderit, affectus ille eschara est, atque ita Græcè vocatur, Latine crusta: crustam verò circumveniunt rubor excellens et inflammatio, et exiguae raræque pustulæ orientes, hisque alie supervenientes in unum coalescunt, atque inde latum ulcus efficitur. Id si interim in os depascendo serpit, ad columellam usque pervenit, linguam etiam occupat et gingivas: dentesque inde labefactantur et denigrescunt. . . In collum etiam phlegmone erumpit. . . . Atque isti haud ita multis diebus intereunt. . . . At si in pectus per arteriam id malum invadat, illo eodem die strangulat. . . . Pueri usque ad pubertatem maximè hoc morbo tentantur.

‘Tussis spirandique difficultas enascitur, et modus verò mortis quàm miserrimus accidit. Pallida his seu livida facies, tristantur cùm tonsillæ comprimuntur. . . Cùmque decumbunt, surgunt, et sedeant, decubitus non ferentes: quod si sedent, quiete carentes

iterum decumbere coguntur; plerumque recti stantes obambulant, nam quiescere nequeunt. Inspiratio magna est, expiratio verò parva; raucitas adest vocisque defectio. Hæc signa in pejus ruunt, cum subito in terram collapsis anima deficit.'

In this quotation, however, the words 'ad columellam usque pervenit, ipsamque exedit,' as well as other expressions relating to true spreading ulcers, are left out. When Aretæus speaks of the treatment of these affections, he again alludes to these characters, and says further, 'Quibusdam, et columellæ usque ad palati os exesa est; quin etiam tonsillæ ad basim usque, et epiglottida, ac propter cicatricem devorare neque solidum quicquam, neque liquidum poterant;' all which expressions undoubtedly allude to something very different from diphtheritis. There appears to be no trace of such a disease in the writings of Hippocrates: the passage quoted by M. Bretonneau seems not at all to refer to it; nor is any thing of the kind to be found in Celsus. But we cannot be surprised at this, nor even at the few notices of such an affection by later writers, as there is so great a probability that it was often considered as an ulcerous affection of the throat, until the error was corrected, as it was with respect to M. Bretonneau himself, by repeated and careful examinations after death. Several Italian and Spanish physicians are referred to by M. Bretonneau,—some of whom unquestionably had seen similar epidemics. But, in fact, to speak of books that are in every body's hands, we find Dr. Cullen, in his *First Lines of the Practice of Physic*, speaking of the *cynanche trachealis*, or croup, making this observation: 'When the internal fauces are viewed, they are sometimes without any appearance of inflammation; but frequently a redness, and even swelling, appears; and sometimes in the fauces there is an appearance of matter like to that rejected by coughing:' the matter rejected by coughing, he had previously spoken of as 'of a purulent appearance, and sometimes films resembling portions of membrane.' And from the frequent assertion in other authors, who have written particularly on croup, that it is sometimes occasioned by *angina maligna*, there is reason to suspect that they have seen without understanding the disease. It may be observed, before we quit this part of the subject, that the peculiar membrane formed in the trachea in cases of croup is described by some of the Italian physicians, quoted by M. Bretonneau, as early as the commencement of the seventeenth century. The first description of the disease in this country was made by Dr. Home, the father of the present Professor of the Practice of Physic in the University of Edinburgh.

During the progress of the diphtheritic epidemic at Tours and in the neighbourhood, circumstances frequently occurred of a kind to create a belief in the disease being contagious. The medical practitioners are, we believe, divided on that subject; and M. Bretonneau does not speak positively concerning it. Its frequent occurrence in several children of the same family—its attacking, in one week, twelve day-scholars of one of the schools, at a time when there were no other cases in the town,—and the disease subsequently appearing in other individuals of some of the families to which these children belonged,—with other circumstances mentioned in different parts of the work (particularly at pages 383 and 440), render its contagious nature extremely probable: the immunity of many individuals in situations in which they might be supposed to be within the sphere of the contagion, is a difficulty which presents itself no less in fevers and other contagious disorders than it did in this. The contagion is at least not very powerful, and seems to require for the production of its effects the presence of other causes not yet accurately ascertained.

Diagnosis.—The subject of diagnosis, as regards the diphtheritic inflammation of the throat, is treated of at considerable length; and, like most other parts of the work, is again recurred to subsequently, under the head of *Spécificité de l'Inflammation Diphthérique*. The reasoning under this head is probably for the most part correct; but we do not find that which the practitioner will naturally look for with the greatest anxiety—any description of symptoms distinct in character and easily recognisable, by which, on the occurrence of similar cases, the serious mistake of this disorder for common sore-throat would be prevented. We cannot gather from any thing which is said by the author any other means of distinguishing the disease than a very careful examination of the fauces, and particularly of the tonsils, and an accurate discrimination of the peculiar white membranous patches of diphtheritic inflammation from common ulcers. It would appear, that during the epidemic occasional cases were met with of a very deceptive character, as respects the general symptoms, cases resembling what we are accustomed to consider spasmodic croup; but in which M. Bretonneau conceives that the mucous membrane of the larynx is suddenly and temporarily affected by changes of temperature, exposure to cold, &c. &c. The following case occurred in his own house.

‘At the time when the angina maligna was very fatal at Tours, a little girl, of four years of age, brought up under my care, whom I had left perfectly well in the morning, was attacked in the evening

with the same cough, the same dyspnœa and extinction of voice, which in another child had announced the rapid progress of the diphtheritic tracheal angina, and had preceded death but a few hours. Was it to be supposed that the pellicular inflammation, which in ordinary cases was preceded by more or less marked difficulty of deglutition, had already made a clandestine progress sufficient to have invaded the respiratory canals? There was not the least swelling of the lymphatic glands corresponding with the angle of the jaw; the amygdalæ and the parietes of the pharynx were neither red nor tumid. It could not be diphtheritic angina; for if the larynx had been primarily affected, the lateral parts of the neck would have been found tumefied. But still, was there not reason to fear, even if this sporadic croupal affection was different from diphtheritic angina, that it was not less formidable? The child did not complain of any pain in the larynx. Preparations were made for a stimulating pediluvium, and for the application of leeches; an emetic also was under consideration. During this time the little patient fell asleep; the pulse was found not to be quicker than usual; the inspirations were whistling; the respiratory movements were not hurried. The cough was infrequent, short, hoarse, and only interrupting sleep for an instant; it had a hollow sound, and made the same impression on the ear as if it had been heard from a distance. It presently became softer, in consequence of which the leeches were deferred. A slight moisture, which we did not wish to interrupt, caused the pediluvium to be dispensed with. The cough became more and more catarrhal; and on the following morning, hardly differed from that of a common cold: on the day after that the child had no complaint.'—P. 265.

Treatment.—The fatality of the diphtheritic angina, and its ungovernable character under all ordinary remedial means, make the consideration of its treatment exceedingly important: its fatality is far beyond that of common epidemics; and the usual methods of treatment seemed, we are told, not only not to alleviate, but actually to exasperate the malady. For the present, it seems to have ceased to ravage the town of Tours as an epidemic; but we see by the latest additions to M. Bretonneau's work, and have been informed by a still more recent communication from Tours, that sporadic cases of it yet occur, both within that city and the neighbourhood; and that the form in which the disease appears is as severe and as fatal as when it was first observed eight years ago. Other parts of France,* and probably other countries, will in all probability be visited with it; for we are not informed that there is any thing particular in the situation of Tours to account for its peculiar prevalence there; indeed M. Bretonneau has not attempted to speak of the causes of the affec-

* See a subsequent note.

tion, or alluded in any part of his work to the medical topography of Touraine. Tours is situated in a fertile plain on the left bank of the Loire; the opposite or north bank of the river is bordered by heights covered with vineyards: the course of the river is sufficiently rapid, its bed is sandy, and its waters remarkably clear: the plain on the south bank of the river is about two miles broad, and bounded by the heights of Grammont, St. Avertin, &c., at the foot of which it is traversed, and in some degree bounded, by another river, the Cher, which joins the Loire a few miles further west. In the rainy seasons the waters of the Cher not being confined, like the Loire, by high artificial embankments, overflow a great part of the plain, so as sometimes very nearly to approach the walls of the town. This happens sometimes in the autumn, and occasionally in the spring, at which time of the year the strong west winds come from the Atlantic charged with rain; but the inundations are never of long continuance. The summers are generally dry, and the winters mild: generally speaking, we should say the distinguishing characteristic of the climate of Touraine was its dryness. The reputation of that part of France for salubrity, as well as for beauty, is well known.

So long as the practical measures were directed against the mere violence of the disease, or resorted to with a zeal and haste supposed to be called for by the rapidity of its progress, so long were such efforts eminently, nay, almost uniformly, unsuccessful. Bleeding, by means of leeches, was carried to the utmost extent, not only without a good effect, but apparently with that of increasing the tendency to the spreading of the diphtheritic inflammation: blisters were most actively employed without the least advantage; the sulphuret of potash, the decoction of capsicum annuum, &c., were given in vain; vomiting and nausea were excited, without producing the least amendment; sinapisms, pediluvia, purgatives, stimulating enemata, &c., were persevered in so long that M. Bretonneau confesses he is now astonished that he did not sooner see their absolute inadequacy to the required end. The only means from which any good was derived was the application of the concentrated muriatic acid to the spots or patches of false membrane, as far as it could be reached; and this of course was an agent of very limited powers, and when the larynx, trachea, or bronchi, were filled with such membrane, utterly powerless.

Whilst these unsatisfactory trials were going on, and indeed when they had been continued for some time (from November 1818 until April 1820), the deaths from the disease being yet numerous, cases of the diphtheritic angina

began to appear among the English residents at Tours, and to present themselves to the particular observation of Dr. Conolly, who has resided and practised in that city since the year 1817. His first two cases were in one family, and both ended fatally in one week : the first being the youngest daughter of an English gentleman residing at Tours, and the second the governess in the same family. Both these cases began with the appearance of common sore throat ; but as Dr. Conolly was convinced that both the patients had died of true croup, commencing in an unusual manner, he determined, in case of meeting with any similar case, to adopt the mode of treatment which we believe the American physicians first practised, and which was some years ago adopted and warmly recommended by Dr. Hamilton, since which time it may be said to have been common in England ; we mean, of course, the free and repeated administration of calomel. An opportunity of doing this soon occurred : another case presented itself in the same family in which the two former cases had happened, and the consternation of the family, and the anxiety of the medical attendant, may readily be conceived : the subject of this case was a young lady, of the age of fourteen, and Dr. Bretonneau attended with Dr. Conolly, as he had done in the other two cases. Calomel was proposed in a consultation with Dr. Bretonneau and another French physician. The practice was new to them, and they were not exempt from the common prejudice entertained in France against the freedom with which English practitioners are accustomed to employ calomel : they acceded, however, to his proposal, on the express condition that they were to be considered as mere spectators, and not in any degree accountable for the result. Five grains of English calomel were given every two hours for twenty-four hours, when, in consequence of the mouth becoming affected, it was given every four hours only for twenty-four hours more. As soon as the system became evidently affected by this medicine, so soon did the symptoms begin to yield ; the white specks or patches separated and came away, and the patient eventually recovered. It was perhaps to be expected that the French practitioners should distrust the connexion of this effect with the plan which had been proposed by the English physician ; particularly as the muriatic acid had been also applied in this case : there was a possibility that the disease had been limited to the pharynx ; and such they considered it to have been, although a very different impression was left on the mind of Dr. Conolly. Still, it is rather curious that after the extensive subsequent experience he has had of the wonderful effects of a mercurial treatment, M. Bretonneau should dwell

so lightly on these three cases, and should refer his own conversion to the unexpected success of the same treatment in a case which happened some months afterwards. The instructive cases we have just mentioned are noticed with great brevity in M. Bretonneau's work, not as illustrations of the advantage of the mercurial over any other treatment, but to shew the inefficacy of sanguineous evacuations.

‘ Numerous facts have satisfied me that the progress of the diphtheritic inflammation is not retarded by taking away blood. Its insufficiency may have been remarked in the cases already cited.

‘ In a young English lady who had the angina maligna, apparently in a very slight form, I observed that the symptoms of croup declared themselves immediately after the application of leeches. The flow of blood had been so abundant, and so long continued, that the face, the tongue, and the lips, were completely pallid. (The quantity which had been lost might be estimated at thirty-two ounces.) The diphtheritic inflammation of the air passages made a rapid progress, and was speedily fatal.

‘ Five or six days after her death her younger sister was severely attacked with *pharyngean diphtheritis*. *The invasion of the air passages was prevented by topical treatment, to which was joined the prophylactic treatment of calomel.*

‘ The governess of this young lady had also fallen a victim to this disorder; and it could scarcely be doubted that it was transmitted to the two sisters by contagion.’—P. 223.

These cases, we have said, took place in April 1820. The epidemic continued to prevail among the French inhabitants during the whole of the summer of that year with a most lamentable fatality. In the course of that summer three other cases, in the children of English residents, presented themselves to Dr. Conolly; all three were treated with calomel, and all three recovered. At length the case occurred which seems fully to have convinced M. Bretonneau of the value of calomel: this case happened in November, six months after those mentioned in the last extract. The success of the English treatment had of course been spoken of, even among the French; and Dr. Conolly was one day besought by a poor French woman to see her only child, a boy six years of age, who was dying of croup, and whose case had been given up in despair by the French practitioners, including M. Bretonneau: appearances, indeed, were so bad, that the mother had been told ‘ there was no hope—she had nothing to do but to order a coffin.’ It is but candid to say, that such, on first seeing the child, was Dr. Conolly's opinion also; the stridulous breathing might be heard on the outside of the house; the pulse was 160; and every thing indicated

the last stage of croup. For the satisfaction of the mother, rather than with any hope of advantage, five grains of calomel were given to the child every hour : six hours afterwards the boy seemed to breathe a little better, the respiration appeared not so *dry*, and the medicine was continued for four hours more, when, the gums beginning to be affected, it was given every two hours only : at the end of twenty-four hours the child began to expectorate ; and at length *the whole of the false membrane was expelled* : the calomel was persevered in for some days longer in diminished doses, and the child got well. We have given these particulars from a manuscript in our possession, believing this question to involve most serious practical considerations. M. Bretonneau alludes to this case, briefly, it is true, but in very decisive terms.

‘ Even in cases where the topical treatment is no longer applicable, an energetic mercurial treatment affords a precious resource. It was only towards the end of the epidemic that an example of unexpected cure, obtained by an English surgeon, M. Conolly, became the occasion of new trials, which were crowned with a success that passed all expectation.’—P. 93.

After this time the French practitioners at Tours adopted the mercurial plan ; but it was often difficult to persuade them to use it with sufficient boldness, and more so to persuade them to employ calomel made in England, instead of the very inferior French preparation. We know it to be the opinion of Dr. Conolly, that all the cases were examples of *modified croup* ; and that calomel never failed to cure the complaint when given sufficiently early, and with sufficient perseverance. Of the advantages of calomel when the trachea is affected, M. Bretonneau seems now to be fully persuaded, although he yet hesitates to employ it so long as the disease is within the reach of local applications. The following is one of his own cases :—

‘ F. P., aged seven, of small stature. For five days sore throat, with tumefaction of the lymphatic, cervical, and sub-maxillary glands. Fever.

‘ 6th day. Sore throat and general symptoms diminished.

‘ 7th day. Frequent cough. In the evening, cough and voice croupal ; expectoration abundant, glairy, and frothy. Fragments of concretions are seen in the expectorated matter, which evidently come from the larynx. Orthopnoea ; whistling inspiration ; alteration of the tone of the voice, most perceived when the child speaks very low. On examining the throat, it is found lined in the whole of its extent with whitish yellow concretions ; tongue covered with a thick, slimy, grayish coat. (*Calomel, four grains every hour.*) After the fourth dose, expectoration easier and more copious ; ejection of a membranous tube, three inches in length ; respiration easier ; two dejections.

' 8th day. The respiration has become more painful, and more frequent: somnolentia; face livid; commencement of asphyxia. (*Friction of the arms and sides of the body with half-a-drachm of strong mercurial ointment: the friction repeated every three hours.*) Agitation; cough, followed by the expectoration of a membranous shred (*lambeau*), thirty lines in length, and thirteen broad; thick, and with irregularly torn edges. The tongue singularly modified; its anterior half clean, moist, and becoming red.

' 9th day. Mouth not at all affected by the mercury; cough less hoarse; respiration easier. (*Calomel, two grains every hour*).

' 10th day. After ten frictions and the administration of two drachms of calomel in *eau sucrée pâte de jujube* and apricot marmalade, when the treatment had been continued fifty hours, the gums were scarcely swelled; respiration was becoming more and more free; the colour of the skin was natural; the cough catarrhal, and not dry (*grasse*); the voice hoarse. The small fragments of concretions were no longer distinguishable from the copious, thick, round-shaped, muco-purulent expectoration, which was accompanied by a small proportion of glairy matter coming from the pharynx: but by repeated washings and agitation of the expectorated matter, the mucus became diluted, and some insoluble particles of concrete matter were deposited by the fluid. During the day there were two or three dark green dejections. Vomiting had occurred, after repeated attacks of nausea. The calomel and frictions were suspended. Dyspepsia; rapid emaciation.

' 11th day. Nausea; muco-purulent expectoration, streaked with blood. (*Demulcent drinks*).

' 12th day. In the morning, desire for food; in the evening voracious appetite. Expectoration, as yesterday; but less copious.

' 13th day. The voice gradually regains its natural tone; appetite great; expectoration decreases, and is no longer bloody. After the 10th day the pulse was natural, and the patient convalescent.'—P. 104.

Very greatly, we think, is it to be regretted that such examples of success should have had so limited an influence over French practice. In the destructive epidemic at La Ferrière, near Tours, so late as November 1825, eighteen patients died out of twenty-one who were attacked. The three survivors had been treated with mercury; the acid application being also employed: in the last case the relapses were frequent; in some of the other cases we are told calomel was tried; but it is evident from what is said that it was often resorted to at too late a period, and not pushed far enough when employed. The same observation applies to the still later epidemic at the little hamlet of Chenusson, in the month of March in the present year:* this little village

* An epidemic, apparently similar in all respects, lately appeared in the canton of Magnac Laval (Haute Vienne). The annual number of deaths in

contains about *fifteen* houses; and in the course of a few weeks *seventeen* children died in it. Calomel seems only to have been tried in two cases, and in small doses, yet both patients seemed at one time to be recovering, and are reported to have died in consequence of gangrene supervening in the blistered surface behind the neck, death taking place in each without any difficulty of respiration. It should be mentioned that after these seventeen patients had died in a very short space of time, the sick were removed as soon as the disease appeared to the General Hospital, at Tours, and there treated more efficiently.

From many cases we give insertion to one, partly because it is short and distinctly marked, and partly because in it no topical applications were employed at all.

‘Fransinot, aged ten, of small stature, pale complexion. Deglutition painful since the 25th December: forty grains of calomel have been given in two days, by M. Henri Brault. On the 28th December the calomel was discontinued. The child’s parents have given it garlic boiled in vinegar. To-day, fourth day of the disease, admitted into the hospital. Hoarseness, extinction of voice, swelling of the sides of the neck; tonsils tumefied, of a livid red colour, and partly covered with grayish shreds (*lambeaux*) of concrete matter: the tonsils approach near to each other, and deglutition is painful and difficult. (*Calomel, a grain every hour; mercurial collar.*)

‘5th day. The same appearance of the pharynx; symptoms and treatment the same.

‘6th day. Diminution of the lymphatic glands; the tonsils begin to be denuded, but remain tumid, and of a violet tint: hoarseness and extinction of voice continue. (*Four drachms of castor oil.*)

‘7th day. The tonsils subside; the engorgement of the lymphatic glands is dissipated; deglutition easy; return of appetite.

‘8th. Mercurial treatment put an end to, appetite considerable; the voice begins to grow clear. From this time convalescence was uninterrupted.

‘The diphtheritic inflammation of the pharynx appeared to be already modified by the mercurial treatment when the child was admitted into the hospital. No topical treatment was had recourse to. Forty-eight grains of calomel were taken, and forty inspired.’—P. 396.

Of twelve cases thus treated, nine recovered. Two patients died from exposure to cold when under the full influence of the medicine.

Yet, after all his experience, and even after all his success,

the commune is generally about 35; but in the year in which this epidemic prevailed 119 died, chiefly children. Leeches, muriatic acid applications, &c., were employed; but the mercurial plan does not seem to have been heard of in that part of France.—(*See the Revue Médicale for August last, p. 340, and the Collections in our present Number.*)

we find M. Bretonneau speaking hesitatingly, and we think somewhat inconsistently, of calomel. In some passages of his work he justly praises it; in others he dwells unduly on the effects of the excessive employment of mercury, and gives a decided preference to local applications. He occasionally regards it a prophylactic, and at another time says it is the only resource when the air-passages are filled with false membrane, and topical remedies are inapplicable. Taking the most deliberate view of the epidemic, there appears to us not the smallest reason to doubt that the cases were all instances of modified croup, a disease in which not the violence only or the rapidity of its progress were the great obstacles to successful treatment, but the tendency to the formation of false membranes which, by their extent or accumulation, opposed an impediment to respiration, and destroyed the patients by asphyxia. Now, when we see one party acknowledging the insufficiency of ordinary measures to remove, or of any measures to modify or prevent this most dangerous consequence; the utter inadequacy of bleeding, leeches, blisters, and all common means; and relying on a topical application, which is only practicable in the most limited and the least dangerous form of the disease:—when we see another party trusting wholly to a medicine, not untried, not unknown, but of which the use has been sanctioned by the highest authority in cases between which and those of the epidemic there is the clearest analogy, and trusting to it in the very worst as well as the slightest cases:—and when both parties unite in bringing forward the strongest examples of the efficacy of such a medicine,—we cannot but deplore that any obstacle should be thrown in the way of its utility in a most fatal disease; we cannot but regret that a physician so liberal minded, so enlightened, so humane, so energetic, as M. Bretonneau, should be apparently deterred from doing complete justice to a mode of practice introduced from another country, in the fear, it would seem, of the ineffable criticisms of the Parisians. The French reviewers do not indeed pardon his employment of the remedy, but maintain, in the face of him and his book, and his facts, that the adoption of that remedy was uncalled for; thus shewing in what a spirit they would have met their unprejudiced countryman if he had said more than he has done.

In one respect we cannot but think that M. Bretonneau labours under a singular delusion. Admitting the efficacy of calomel, and seeing the constitutional effects of this powerful agent whenever that efficacy has been manifested, he yet attributes its influence in diphtheritic angina, or modified croup, to a *local* action on the membrane which is the seat of

the disease. Believing, as many English writers have done, that mercury has the power of 'breaking down the thicker part of the blood,' a power to which its good effects in croup have been particularly ascribed, he thinks it exerts merely a topical action, not on the false membrane, but on the mucous membrane subjacent. On this account he neglects no opportunity of applying it topically, causes it to be taken as snuff, and forces it into the opening in the trachea after performing tracheotomy, a practice which we believe to be not only useless, but pernicious. M. Bretonneau's opinion is contained in the following passage:—

'I am inclined to think that even in those cases in which the tracheal diphtheritis has been happily modified by the mercurial treatment, the pellicular inflammation has been modified by the submuriate of mercury insinuating itself into the air-tube. I imagine it to penetrate thither by means of the continuity of the mucous coating of the posterior part of the fauces and air-passages, proceeding by degrees and by the impulse of each respiratory movement. It may be conceived how small a quantity can be introduced in this manner; and we observe, therefore, that the progress of diphtheritic inflammation in the air-passages is rarely suspended if the treatment is not commenced on the first attack of the malady.'—P. 445.

We do not think these opinions are supported by any appearance of facts; and they are certainly invalidated, not only by the amendment in Dr. Conolly's cases keeping pace with the mercurial affection, but also, we conceive, by the results of innumerable cases of common croup throughout our own country since the mercurial plan of treatment was fortunately introduced.

M. Bretonneau seems to have neglected no opportunity of endeavouring to save life by performing the operation of tracheotomy in desperate circumstances. We are sorry to add that he has not often been rewarded with success: once only, we believe, out of eight trials. The reproduction of the false membrane, as well as its frequent extension into the small ramifications of the bronchi, presents a formidable objection to this operation. M. Bretonneau at one time encouraged a hope that the tendency to reproduction might be prevented by previous fumigations of muriatic acid; and he now rests this hope on the use of calomel. In fact, since the publication of his work, and so late as October in the present year, a case of diphtheritic angina presented itself to him, in which tracheotomy afforded the only chance of life: the operation was extremely well performed, and the child seemed to do well for six and thirty hours afterwards, when the breathing, which had been instantly relieved by the

operation, again became difficult, and the child died. Calomel had been given in this case, but not before the child had been ill several days. On examining the body after death, the pharynx and larynx were found completely covered and blocked up with the peculiar thick white membrane, but there was *none in the trachea*. It was a question in this case whether the child might not eventually have recovered, if the operator had abstained from injecting calomel, alum, &c. suspended in mucilage, into the trachea, after the operation.

It is but just towards the author to insert his observations on the method of applying the muriatic acid, on which he places so much dependence, and which, when the complaint is confined to the pharynx, appears to be of singular service.

* The concentrated muriatic acid applied to healthy mucous membranes produces an inflammation with a membranous formation (*une inflammation couenneuse*.) The first superficial touch whitens the epithelium, which is detached and renewed without erosion. But if the action of the acid is prolonged, or is repeated at short intervals, it produces an ulceration, which becomes covered with a whitish concretion, and cicatrises more or less slowly. It is necessary to know this circumstance when we apply the acid to modify diphtheritic inflammation, in order not to confound the disease with the effects of the remedy; or we might prolong the application much more than was necessary. It is best that the first applications be energetic, and that they be seldom repeated. I have tried different methods, and give the preference to the following:—

‘ In order to convey the acid to the back of the pharynx and to the tonsils, I make use of a fine sponge firmly fixed at the end of a curved piece of whalebone. Before touching the false membrane of the throat I soak the sponge in concentrated acid, and then press it until it is merely moistened. This precaution is taken to prevent the acid being squeezed out by the convulsive movements of the throat, and carried beyond the part where I wish it to be applied.

‘ In this manner it is easier to direct and graduate the action of the caustic than by mixing it with honey. It is only in cases in which the diphtheritic inflammation of the pharynx already extends beyond the sphere of sight, that this latter mode of application is to be preferred.

‘ The first effect of the topical treatment is to give a more serious appearance to the incipient diphtheritic inflammation, the concretions appearing at first thicker, and more extensive. In twenty-four hours afterwards, the effects of the acid are limited, and have reached their acme. If the concretions do not increase, if they begin to be detached, we may be assured that the specific inflammation is already modified: after that, the topical applications should be distant from twenty-four to thirty hours, and limited in number, strength, and duration.’—P. 242.

The acid was sometimes applied in the form of vapour, but is in this way so difficult to manage, and attended with so much danger, that it is unnecessary to say more concerning it.

Scarifications of the tonsils were practised in some cases, and were not only of no use, but, in M. Bretonneau's opinion, productive of most troublesome symptoms. M. Bretonneau is fond of giving the polygala senega with calomel, merely, we suppose, as an expectorant.

It is scarcely necessary to say more than we have done of the general character of this work. Its chief fault, as we have already remarked, is want of arrangement. In other respects it is worthy of much praise, and is evidently the result of careful, diligent, and prolonged investigation, and of observations and experiments made with the utmost candour, and the most philosophical desire to arrive at truth.

IV.

A most excellent and learned Work of Chirurgie, called Chirurgia parva Laufranci—Laufranke, of Mylayne, his Briefe, reduced from dyvers Translations to our Vulgar or Usual Sense, and now first published in the English Prynte, by JOHN HALLE, Chirurgien. Imprinted at London, in Flete Street, nyghe unto Saint Dunstone's Church. By THOMAS MARSH. Ann. 1565. Black Letter.

THE absolute want of any late English work of importance, connected with the profession, and disappointment in not receiving a French work sufficiently early for review in the present Number, have induced us to bring the present volume before our readers. As it was published in the commencement of Queen Elizabeth's reign, we may regard it as a fair specimen of the surgical knowledge of that day. It proves to us, also, how little advancement had been made in this country for several centuries, and the little intercourse that could have been held between the surgeons of France and England; for let it be remembered, that at the very time that this book was published, Ambrose Paré was in the height of his reputation, and that his name is not so much as mentioned in any part of the volume.

Laufranc of Milan died in 1300 A.D., so that two hundred and fifty years had elapsed between the date of the original publication and this translation. So little progress, however, appears to have been made in the intermediate time, that Halle thus speaks of his own labours in his dedication:—
'Unto the Worshipful the Maisters, and consequently to all the whole Company and Brotherhood of Chirurgeons of London.'

' I therefore, as preparative to the rest that shall folowe, dedicate thys my symple laboure in setting forth *this excellent compendious work*, called *Chirurgia parva Laufranci*, under your ayde, helpe, succor, tuition, and defence, which was translated out of French into the old Saxony Englishe about two hundred yeres past. Which I have now not only reduced to our usual speach, by changyng or new translating such words as now be inveterate and growne out of knowledge by processe of tyme, but also conferred my labours in this behalf with other copies, both in French and Latin; namely, with Maister Bacter, for his Latin copie, &c. &c.; whose good helpe hath not a little furthered me in these things, to the intent that it might perfectly come forth to a *public profit*; whiche to do I was constrained, not only because I would not trust too much to myne owne rude judgements, but that also by the authoritie of dyvers men of knowledge, *this excellent work* (as it is worthy) may ye more effectually be allowed and accepted.'

Following this dedication, we have an address from 'W. Cunningham, Doctor in Phisique, unto the Professors of Chirurgie—Salutations;' and in speaking of the original work and the present translation he says:—

' What prayse and worthie fame chiefly of you, and then of those which have nede of chirurgie, John Halle, one of your felowshippe, have deserved, these his labours doe apparantly shewe. *For where as, for want of good authors in your own native tongue, chirurgie have not a little decayed, she is now again by his painfull travelles not a little restored.* And for as much as in all studies it greatly doth profite to have first briefe and compendious introductions, he hath translated a short Isagoge of that noble chirurgien of Millan named Laufranke his Briefe. In whiche, whether Laufranke oweth more to him for the restoring of his decayed worke, or he to Laufranke for the immortal fame hereby obtained, I cannot easily judge. But this I dare boldly affirm, that Laufranke being before corrupted, and of small use, is nowe, by the laboures of my friende John Halle, purged and made pure: so that henceforth I may rightly call it Halle's Laufranke.'

Such was the estimation in which this work was held at that time.

In the preface the translator discusses the necessary studies and qualifications of a surgeon; and refers to many practices prevalent in his day, injurious to the science, and degrading to its professors. It is impossible not to admire the good feeling that pervades all his reflections; and much do we wish that some of his admonitions might reach the hearts of many in our own times. Speaking of the qualities of a surgeon, he says, in the quaint, but expressive language of the period—

' All that should be admitted to that art should be of cleare and perfect sight, well formed in person, hole of mynde and of mem-

beem, slender and tender fingered, havynge a softe and stedfast hand; or, as the common sentence is, a chirurgeon should have three dyvers properties in one person, that is to say, a harte as the harte of a lyon, his eyes lyke the eyes of an hawke, and his handes as the handes of a woman. . . He ought to be well mannered, of good audacitie, and bold, where he may worke surely, and contrariwise doubtful and fearfull in thynges that be dangerous and desperate.

‘He must be gentyll to his patients, witty in prognostications, and forseyng of dangers, apte and reasonable to answer all doubts and questions belonging to his work. He must also be chaste, and merciful, no extortioner, but so accomplish his reward at the handes of the ryche, to maynteyne his science and necessary lyvinges, that he may helpe the poor, for the onely sake of God.’

We have already occupied a considerable space in this prefatory matter; but we cannot refrain from quoting one or two more passages, which, though not perhaps in the same degree as formerly, are still applicable to the present times. His observations respecting knowledge are peculiarly excellent.

‘For as good Doctor Record, in the preface to his *Urinall of Physyke*, saith, what is learnyng unlearned, or knowledge unknown, anythyng els but a vayn name? learnyng then increaseth moste, when it is studied of moste; and learnynge then triumpheth moste, when it hath moste favourers and folowers; and then doth ignorance (learnyng’s enemy) rejoyce moste, when learnyng reyneth in fewest, and blindness ruleth most; so that then is learnyng most profaned, contemned, and hated, when she hath most enemies; that is to say, when most men are ignorant. For that old saying shall always be true, learnyng hath none enemy but the ignorant.’

The circumstances of which Halle complains in the following passage have remained unaltered till within a very few years; so long a time often is required between the discovery of an evil and its remedy. Even we can remember when respectable surgeons regarded their apprentices as merely servants; and to this we fear much of that ill feeling, that utter want of good faith, that mutual distrust between man and man, which is too much the characteristic of the profession, is to be attributed. We would be glad to hope, that as more respect is had by surgeons for the duties they owe their pupils, so with the next generation a more honourable, upright, and gentlemanly conduct will be predominant.

‘For truly there are many that take servants and apprentices, not for to teache them science, but only to be their drudge, and to do their toyle and labore; which is the cause that so many come out of their yeares so ignorant. For their intent is to have servantes to dooe the toyle in their house, and not to make them cunnyng

men; yea, and some will refuse a younge man that is learned and apt to understande, to have an ignorant slave, to beare the water tankard,—such a one (as the common proverbe is) that will never doe man of science harm unless he steale away his dynner.’

Laufranke, in his own preface, speaks very highly of the instructions his brieft contains, which he says, ‘albeit that they be short, yet are they of great commodity and profit.’ The subjects of which he treats are, ‘the curing of woundes, apostemes, ulcers, and fistulas, wyth a litle of algebra, or restoration, and some curations of the eyes.’

As a specimen of the surgery of the time, we shall make our first extract from the chapter on ‘a simple wound.’ The practice here recommended continued in vogue for more than a century afterwards, although it has been properly conjectured that the sympathetic powder of Sir Kenelm Digby enjoyed its reputation from the circumstance of those who employed it, always uniting wounds by the first intention. Years, however, elapsed before the scientific explanation of the fact was given; and it is well known, that on the continent many wounds are still kept open, to heal which by the first intention would be the endeavour of an English surgeon. Our villages, however, even now, in some remote parts of the country, exhibit as barbarous a surgery as that of which we are presenting an account to our readers.

‘Be therefore in assurance, whether the wound be made with the poynt of any instrument, whether it be knife, speare, arrowe, or any other lyke; for they of all others are sonest conjoynd, if it touche no sinewe, chorde, panicle, nor the muscles that cover the bone (which thou maist knowe by that it is withoute all payne and ache). It shall be sufficient that thou only put in a tent, enfused in oil of roses warme, which necessarilye shall for one day holde the skinn open; and make the patient rest from all manner of exercise of the wounded member: and then, if it be without all ache and swellynge, thou maiste suffer the wounde to close. Provided alwayes, that the patient rest ii or iii daies, and he shall be whole; but if there be any aking or paine, it is a signe of the hurte of a sinewe, muscle, panicle, or chorde: and then it shall be conveniente to infunde or pour into the whole wounde oyle of roses whot, and make a tent, not to greate, nor to longe, and that it be such as constreigne not the sinewe, least that thereby pain should be induced, and dip the same in oyle of roses, and the yolk of an egg warmed, laying thereon a repercussive of the same medicine, and annoynte the member all about with a medicine made *ex oleo rosate uncia una, aceti uncias ii, boli armeni uncia dimidio*; and use thys until the payne be slaked, and that the wound yield saniem, for then it is sure from apostematation and spasm. After that, put in a dry tent of lint, made of soft linnen cloth, and upon that a mundicative, made after the ordinance hereafter following:—*Rec. Mellis rosacei colati uncias*

tres; farinæ hordei subtilissimæ unciam unam; terebinth. lotæ uncie semisse. Boile them a little together to the perfectness of an em-plaster; and note, that the terebinthine ought not to be boyled with the reast, but should be added in the end of the boiling; and so at the ende he shall be healed. But if the paine cease not, by the infusion of the oyle of roses, and defence of bole armeniacke afore-sayde, then let the patient bloud (if he be stronge) on the contrary side; but if he be weake, make scarifications, or bore hym, daily, provoking the duty of the wombe by a clyster or suppository, if need require, enjoyning hym a streyght and slender diet, till the paine of the aposteme and the inflammation be assuaged; and annoynt it all about with the ointment made *de bolo armeno oleo rosate et aceta*, continueing still as I have taught. Provided always, that for inflammation of the pricking of a sinewe, ye administer thereto no manner of plaster made of herbes and greace, nor maturatives; and for the acke of the member, see that thou suffer no hot water to touch the same, for all these are causes of putrefaction and perdition, whyche is desolation and losse of the member.

In the next chapter, some approximation is made to healing by the first intention, and wounds which are 'cutte after the length of the members' are directed to be bound together, a pledget of tow, dipped in white of egg, being laid upon them. But if the wound should be very long, then we are directed to stitch it together; 'and always let the stitches be odde, if it be possible, beginning first at one end of the wound, and then at the other ende, after that in the midst;' still, however, 'leaving an open orifice in the inferior or dependant part of the wound, wherein thou maist put a tent, by the which the wounde may be expurged.' It is always instructive to see how near the truth scientific men often arrive, and yet finally miss it from not pushing their own principles sufficiently far, or from not suffering themselves to draw the natural deductions from their own experience. We could scarcely have a better illustration of the observation now made than this very treatment of incised wounds. A preconceived theory had led Laufranke to deem the purgation of every wound essentially necessary to its healing. He knew that it would heal completely if the edges were drawn together; but according to his previous notions, this union would have been dangerous, and therefore it was to be prevented. Thus does reason abused prevent us from seeing things as they are in nature.

We have had frequent occasion to disclaim all participation in the present morbid dislike of theory; we shall not consequently be suspected of quoting the following passage, from an annotation of Halle's, for the purpose of bringing theories more into disrepute. Every man, however, of com-

mon observation, must have felt the difficulty of seeing facts as they really exist, and of avoiding to twist them to meet previous opinions. Laufranc had recommended the stitching of the sinews, when they had been divided, and advised 'to have no feare of any ache or payne, that is sayed to come by the pricking of the sinewe, and the stitching with the needle;' and he says that by such manner of stitching the moving of the member is recovered. In the present day we should regard this statement as decidedly demanding investigation; and if the fact should prove as represented, as making it incumbent upon us to follow the practice. But Halle has no such method of proceeding; and, resting upon authority, makes us rather doubt, not of Laufranc's facts, but of the accuracy of his deductions.

'Concerning,' says he, 'the stitching of the sinews, mentioned here in this chapter by the author, I wishe no man to stay thereon as on infallible ground; for it seemeth much agaynse reason and the judgement of moste learned men. Notwithstanding, many things are tolerable in younge children that may not be done to olde men; and other reasons may be made as well to defende thys opinion as the contrarye. But hereafter, if God send liesure, thou shalt have farther instruction in this and other like matters. In the mean season, have this good opinion of Laufranke, that the luckey probes made in that case caused hym to wryte; for we may not judge that such learned men would publish (to the disgrace of all their whole work) that whiche they thought not perfectly true.'

Slight as the reasoning is, who can do otherwise than reverence the candour of the conclusion? What generous mind would not wish to imitate it? When, so many years ago, we find such sentiments prevailing, how ought we not to endeavour, that while we excel them in knowledge, they may not excel us in virtue!

The treatment of wounds of the head is so different from that of our own days, that we have some difficulty in recognising even a slight similarity. It is, however, to be remembered, that the surgery of which we give a relation was merely surgery; and that on no account was the surgeon permitted, by himself, to join medical treatment. The first thing to be done in wounds of the head is to discover whether or not the skull has been fractured; and this is to be ascertained partly by signs and partly by experiments.

'The signs be these:—the feelinge of great paine, vomiting, teares of the eyes, crokedness of the sight, inflammation, or rowling of the eyes, &c. The experiments are these:—take a strong thread, double twisted, and were it, and let the patient hold it strongly in his teeth, and begin thou at the mouth of him, and wyth thy nailes

stretche and streigne out the thread, till thou come at the other ende of the same, holding it streight, a cubit lengthe from the teethe, and make a sounde upon the threde with thy nayle, and doe so often times. If the patient may sustaine the sounde without feelinge of paine, then is not the skull broken to the dura mater; for if it be broken, he may in no wise susteine, nor suffer the harping of the nayles upon the threde; or else thou mayst also take and smyte his head with a small dry wand of willowe or of pine tree, and hold thine ear to his head: and if the skull be whole, it will make an hole sounde; but if it be cut or broken, it will make a dumme noise, after the comparison of a broken bell and a whole.'

These are his directions for removing broken pieces of the skull, which is, however, to be done 'if the broken parte be entered under the whole bone; or if there be any broken parts or shivers which might prick or hurte the dura mater.'

'Mark,' he continues, 'where the under parte joineth with the skull, for there it will be somewhat dented; and sometime the whole circumference, or compass about, will be depressed or put downe. Then for a day or two poure into all the broken skull oyle of roses warm; and in the wounde aboute the skulle laye small pledgetts of tow or lytell pieces of ould clothe, infused in oyle of roses and the yolke of an egge whotte. In the second or third day, labour gently with instruments to remove the bone, removinge all that is to be removed by most tender and delicate workinge; that thou touch not duram matrem, nor the beginninge of any sinewe: and remove, in lyke manner, the lytell shiver that grieveth the duram matrem, if there be any.'

The plan pursued afterwards in dressing the wound was the most clumsy that could be well imagined. It was filled with lint and tomex, and covered with compresses till the whole shape of the head must have been lost in the number and complication of the bandages. Where the fracture was not depressed, nor any shivers of bone pressing upwards, he says, 'it shall suffice to adminyster to the broken bone a *sovereigne medycine* of mel rosarum, &c.'

Our readers may be pleased to learn something of the diet enjoined in wounds. It may indeed serve as a specimen of the general system of the time. That much is extremely fanciful in the injunctions here laid down, cannot be denied, neither can we deny that the principle of treatment is correct. An antiphlogistic regimen we know to be necessary; this was, even in those olden times, peculiarly enjoined, but united with many vain and useless accompaniments, and, unfortunately, the chief attention seems to have been directed to the adjuncts.

'First, let this be as a speciale diete, the croomes of bread washed

in winter five times in warme water, and after the laste washinge put thereon white sagarrosset; and in the sommer, lette it be washed only in colde water, and now and then make the pottage with barlye, but let the barlye firste be soaked, with peindies, or sugarrosset, or with almondes mylke, in all manner of woundes, save onely of the head;—wherein I approve not *almondes*, for they have a manner of fumous propertye, noisome to the head; and if the patient be very weak, or have naturallie a feeble stomache, he may take small chickens sauced with agresta, or with wine of some pomegranates, and lette their drinke be wine of sour pomegranates, and especially for men wounded in the head and sinewye members, giving ten parts of water with one of wine. Or this excellent drinke following, which comforteth the stomach, and defendeth the vapours to ascende; it quencheth heate, and maketh not costive.—℞ Hordei mundi uncias duas, micarum panis, sacchari rosati, granorum granatorum, singulorum unciam unam, prunorum, ficeorum, numero decem. Let all these sethe in ten pounds of water till half be consumed, and then cleanse it, and kepe it in a vessel of glasse, and let it be administered colde. And let nothinge be given actually hot; but if the patiente be yonge and sanguine, and have bledde but little at hys wound, if also he be stronge, let hym blood on the contrary side: but if he be feble, let hym be neutored. And see that everye daye, once, the dutye of the bellye be provoked, by a suppositarye, if neede be, as when it cometh not of itselfe naturallye. For these thynges aforesayd, with a defensive of bole armeniacke, defendeth the wounded member from receavinge of superfluities; for when every course of humoures is ceased, then art thou sure that there shall none aposteme come upon thee.

‘And after this, by lyttle and lyttle, and not sodenlye, permitte thy patyente to a larger diete, and also to the use of wyne, save onely to men wounded in the head, or in the sinewye members, and unto those gave not licence to drinke wyne, excepte for necessitye of faintnesse of the stomake or lake of strength. And then let it be light wyne, soure and well watered; for there is nothinge that doth so much damage unto the head sinews as doth wine; and, therefore, in those manner of woundes it is not goode to graunt drinkinge of wyne, but onely at the ende of the cure.’

We have already referred to the employment of tents in wounds, and the supposed danger of suffering them to close without proper ‘mundification.’ The treatment of wounds was therefore directed according to the greater or less mundification they were supposed to require; and it seems to have been concluded, that a *concavity must remain where there had been loss of substance*, and must be filled with ‘fylthe and corruption.’ The following quotation will afford a fair view of the theory of that period, and the practice that was founded upon it.

‘Also, if a wounde be made with contusion or brusyng, as by a falle, by the stroke of a stone or a staffe, or any other thinge that

is not sharpe, thou shalt not at first administer thereto a consolidate; for in every brusure the flesh and sinewes are of necessity smitten together, and *needes will putrifye. Then would consolidatives constraigne the fylth to tarrye within the member*, and so all the members should be corrupted; or else constraigne thee to open the wounde agayne, whyche shoulde be double paine and labour, bothe unto thee and thy patyente. For *longe febleness of any member induceth the whole body to corruptyon.*

‘Therefore it is fyrste to be riped; secondlye to be mundified; thirdly (if there abyde any holowness) to regenerate and incarnate it; fourthlye, and laste of all, to consolidate it; savinge onlye that if the bruse be but lyttle it wyll then be soon healed by annoyntinge the place aboute the wounde with oyle of roses, and upon the juncture strew powder of myrtles, and mundifye the wounde with a mundicative of mel, and then convenientlye heale it up.’

The second part of this work treats of apostemes, or abscesses, of which we are told the causes are double, *i. e.* inward and outward. The inward are those which we should now call constitutional, and are said by Laufranc to proceed from ‘an abundance of inward superfluities.’ The outward are injuries of every kind. Following this, we have a theoretical account of the manner in which apostemes are formed, so vague and fanciful, however, as to be perfectly unintelligible. In the midst, nevertheless, of the quaint and exploded terms of the art, the different mode in which suppuration may take place, together with the external appearances, are faithfully described. All this we pass over, and proceed to the plan of treatment enjoined.

‘Therefore know thys, that mayste reduce the cure of all apostemes unto one brieve division; namely, to the cure of the whotte and colde apostemes. It is the propertye of an hotte aposteme to be repercussed, resolved, or maturate. And the propertye of the colde aposteme is to be maturate, to be resolved and indurate by exterior heate; for it is seldom seene that colde apostemes be repercussed. Begynne, therefore, in the cure of hotte apostemes with plebotomye on the opposite side, before the confyrmation; for after the confyrmation, plebotomye is to be done on the same syde where the aposteme is; or, if he be feeble, with ventosysye, enjoining him a streight and colde diete, according to his strengthes: for all apostemes that come of an inward cause are wyth repletion.’

Then follow ‘seven thynges contrarye to repercussion of apostemes,’ or an enumeration of those circumstances which rendered it unadvisable to attempt their resolution. Some of them, such as its being in a child or an old man, we should reject at once; others, as ‘if the aposteme be made by waye of derivation, as when the member that expelleth is nobler than the member that receaveth,’ we still act upon. Sup-

posing repercussion, however, to be admissable, then we are to apply

‘The juice of some coulde herbes, as of solanum, (which repercuseth with preveye resolution,) or cum succo postulacæ silvestris, vel umbilici Veneris; cum oleo rosato, pauco aceto, and pauco bolo armeno, or with some one of the good repercussive unguentes to be mentyoned in the ende:

‘If the matter by these meanes be not repercussed, eyther because it inclyneth to some quantitye, or that it be somewhat grosse: when thou hast first purged the bodye, beginn to dissolve it, administryng a little honeye, wythe aforesayde repercussive medicine, and after resolve stronglye, according as thou seest the course of the matter to seare, and the pain and sharpness wasted away. . . But if the matter incline to sainem, in the tyme of repercussion (whyche sometimes is made by meanes of accidents, and not properlye), or in the tyme of resolution, then hasten maturation with maturatives, and being fullye riped, loke for the ripest and most dependent place, and there open it, making great openings in great exitures, and small openings in small exitures, and thrust out all the matter softlye, *except it be very muche, for then it is not good to thruste all oute at one time*, but by leisure, especiallye when the patyente is feble. And when the place is voyded in parte, or in whole, mundify the aforesayde place with mundicatives, and then incarne the fleshe, and consolidate it, with medicines for the same purpose, described in the antidotarye. But beware thou make none incysion till the matter be fullye riped, *excepte it be neare the noble members, or the fundament, or the joints, or if the matter be readye to corrupte the members. For in these cases it is necessary to make incysion before the ripeness, layinge thereto such plasters as may not only mundifye, but also mature the rest that is not ripe.*’

The very great advance that has been made of late years in ophthalmic surgery is one of the proud boasts of the profession. The following passage, however, clearly proves that the necessity of very strict antiphlogistic regimen in acute ophthalmia was recognised even in the time of Laufranc; and that some attention also was paid to the external appearances.

‘The greatest and worst ophthalmia is that wherein there appeareth no part of the conjunctiva, but is covered over with a greate redde fleshinesse, the whole eye being inflated, and also the eyelids, which are as it were reversed. Thys doth sone ulcerate the eye. In the greater and greatest kindes (according to their quantity) to draw bloude from the cephalic veyne, and also to purge whotte humours, gevinge him, lastlye, a diete so slender as the patient may continue wyth, gevinge him also all his meates actually colde; and in like manner also whatsoever is putte into the eye, whiche when it waxeth whotte must be removed.’

All this is plain sense and good practice ; but the following collyrium is a good specimen of the strange notions then entertained of the peculiar virtues of drugs, having no foundation excepting in mere whim and imagination.

‘ You may also for thys purpose laye to the eye “ collyrium album distemperatum cum lacte mulieris puellam nutritientis.” ’

The prescription for the collyrium album is this :—

‘ R Cerussæ ablutæ, drachmas decem.
Sarcocollæ grossæ, drachmas tres.
Amyli, drachmas tres.
Tragacanthæ, drachmam unam.
Opii, drachmæ semissem.

‘ Beate all these well, and incorporate them with cleane rayne water. Then let it be well wrought on a marble stone ; and after make it up in smalle pelletes like lentilles, which, at your times of nede, you may temper *with the milke of a woman that nourisheth a maiden childe* ; and administer it with a feather.’

Our quotations have been so long and numerous, that more than enough must have been given to demonstrate the state of surgery in the early part of Queen Elizabeth’s reign. The nature of the prescriptions at the same period was so amply illustrated in a late Number of this Journal, that to add any specimens here of ‘ the *antidotarie*’ of Laufranc, would be altogether a work of supererogation.

We have yet another extract to add, with which we shall conclude this article. It regards the duty of a surgeon, his moral and his religious habits. To those who, not yet misled by the shallow sophisms of modern philosophy, regard the welfare of the world as intimately dependent upon morality and religion, no apology can be necessary for the following quotation:—it enforces those very obligations of which they acknowledge the importance. To those whose sole business is to raise a laugh at what is serious, and to overturn by ridicule what is impregnable when attacked by argument, we have no inclination to address ourselves. We despise their censures,—but we pity the malevolence of their tempers. The time will arrive, when either they must derive comfort from religion, or, after a life of wretchedness, die without consolation and without hope. Let them think (if amidst the wild recklessness of self-indulgence they can think) of these things. That we are immortal beings, they may deny, but cannot alter.

‘ Furthermore, these things considered and observed, it is expedient chiefly before all things that thou have God’s feare alwaies before thine eies ; that thou leade a vertuous life, and (as nere as

God shall give thee grace) unspotted to the worlde; doing just and vertuous dedes, abhorring and abstaining from all viciousness. Let wicked pride be farre from thy harte; and rather in all humility confesse that thou canst doe nothyng of thyselfe, as thou canst not indeede, but through the grace and merciful favoure of God.

‘ Likewise avoide envye and wicked wrathe; be neyther envious nor wrathful, that any other man of thyne arte hath better successe than thyselfe; but rather endeavoure of thyselfe in the feare and service of God to learne to do better, and to excede others: for to a diligente and willing mind there is nothing to harde nor impossible. Let charitye surmount covetise, so that it have no place in thy harte, otherwise than it shall be requisite for thee to live like a man of science, with a decenete and honest maintenance of necessaries. Let no slothe cause thee to neglect thy cures whereof thou hast taken charge, least through thy negligence they perish, and their bloud call for vengeance on thee at the handes of God.

‘ Let virtue, therefore, I say, be thy guide; let her be both thy rule and compasse wherebye to frame all thy doings. Consider, also, howe by vertuous and holye lyfe, and by faithful prayer, the very angels at Godde’s appointment have descended from heaven to aide and helpe men in their nede, teachinge them remedies for divers griefes, as Holy Raphael was sent to Tobye. . . Moreover, be not ingrate nor unthankeful unto God when he sendeth good success to thy business, good lucke to thy handes, and graunteth thee thy harte’s desire: for unthankfulness many tymes is the cause that our prayers are not heard. Praise God, therefore, for his benefits; pray faithfully to hym in all thy streights of nede; and this doing, be sure that God will prosper all thy wayes, and give good success to all thy workes.’

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ORIGINAL PAPERS.

I. Reflections on Dr. Barry's Theory of Venous Circulation. By F. BAILEY, M.B.

MR. EDITOR,—A short time ago you did me the favour to insert in your periodical publication a letter, in which I attempted to prove that the heart might be considered as the sole organ of circulation. When I made you the communication I was not aware of the opinions lately promulgated by Dr. Barry on that interesting and important subject. Much as I admire the ingenuity of the experiments on

which he has grounded a theory opposed to my own views of the venous circulation, I scruple not to affirm that they will be found, on farther investigation, not so conclusive in the doctor's favour as he at present imagines. To such of your readers as are acquainted with the scrutiny which the experiments in question have undergone, this may appear a bold assertion; and in that light, indeed, should I regard it myself, did I not experience the strongest conviction that the inferences to which they lead are irreconcilable with some notorious and palpable facts, and inconsistent with sound reasoning. Before entering upon the discussion, however, it may be proper to premise what the theory of Dr. B. really is. That ingenious physiologist considers the effort to form a vacuum in the thorax, made during the act of inspiration, as the great and efficient cause of the blood's motion through the venous system. Now if this theory were true, it is certain, in the *first place*, that there could be no circulation through the veins in a foetal state, because in that state there is no inspiration, and consequently neither thoracic expansion nor vacuum; and yet it is unquestionable, that the blood is as constantly and regularly transmitted through the veins of a foetus as through those of an adult in which the function of respiration is duly performed. This simple but incontrovertible fact alone appears to me decisive against the doctrine advocated by Dr. Barry. But there are other facts equally subversive of his theory. Every one who has seen blood flow from a punctured vein knows that, in general, it makes its escape in a continued stream. Now, according to Dr. B., this ought not to happen; but the affluent blood should exhibit the same alternate fits of motion and quiescence which were observed in his experiments, but which are contrary to all experience. And should it be objected, that the instance here cited is not a case in point, because the blood so flowing, by reason of the ligature used in venesection, is placed beyond the reach and influence of the thoracic vacuum, it will be sufficient to reply that, in that case the blood ought not to flow at all, which is equally contradicted by experience: so that, on either supposition, the theory of Dr. B. cannot be maintained. A *third argument*, unfavourable to this theory, may easily be deduced from the very principle upon which the able inventor of it sets out; for, if it be the office of inspiration to promote the flow of blood through the veins, it follows that the opposite of this, the act of expiration, must produce a contrary effect; that is, it must tend to retard the circulation in that system of vessels; and if each inspiration, and its consequent expiration, be of equal intensity (which is the ordinary state of respiration), just as much motion will be gained by the one operation as is lost by the other.* Under this view of the subject, therefore, it is impossible

* The words of Haller, in reference to the effects of respiration on circulation, are as follow:—‘Cum modicæ fiant inspirationes et expirationes, neque ab illis valdè retarditur, neque ab istis nimis acceleretur.’ This observation, however, will not hold good where happens to be any great disproportion between the two actions, as in the violent and continued cough of pertussis, or in the act of sighing. In the former instance there is ocular

to regard the act of inspiration as the great moving power of venous blood, such blood acquiring thereby no *absolute* motion at all. And here I will take the liberty to remark, that the act of inspiration opposes the exit of the blood from the heart as forcibly as it promotes its return to that organ,—by which I mean, that the blood emitted at each systole of the left ventricle will lose as much of its motion by the operation of the thoracic vacuum as the returning venous blood will gain: so that, by the alternate action of these equal* and antagonising forces, it seems impossible that the circulating mass should acquire any *absolute* motion. In short, as regards motion, it is left in the situation in which it would have been had no such forces appertained to the living system.

Such are the chief reasons which induce me to withhold my assent to the theory espoused by Dr. B. There are not wanting, however, *other arguments* tending to its farther disparagement. Thus, it may be said that, if inspiration be the grand agent of venous circulation, blood can only flow to the heart as often as that inspiration occurs; that is, on the average, about twenty times in a minute. And if to each inspiration we assign two pulsations of the right ventricle, that ventricle will contract only forty times in a minute, or about half as frequently as it ought to do according to the statements of all the best physiologists; for, in the opinion of such physiologists, the pulsation of the left is always a measure of the number of contractions performed in the same time by the right ventricle.† But, farther; the observation just made will apply with equal propriety to the left ventricle also: for, since that ventricle is manifestly dependant on its fellow for a supply of blood, and can only contract as often as such supply is afforded, it is evident that forty must be the number of its pulsations also in the given time; a conclusion, the bare recital of which sufficiently evinces the validity of the principles from which it proceeds.

But, not to multiply arguments unnecessarily, I will take leave to remark, by way of conclusion, that, as circulation and respiration are both essential to life, it is requisite that these functions should be performed so as not to interfere with each other. Now that important object is clearly attainable in the manner I have ventured to suggest, viz. by supposing respiration to consist of two opposite actions, which, counterpoising each other, affect not the motion of any part of the circulating mass. In fine, if it be our object to ascertain the real effect of inspiration upon the motion of the blood (whether venous or arterial), we ought never to lose sight of its antagonising power, the act of expiration; otherwise we shall, assuredly, come to erroneous conclusions. Through the neglect of

proof of congestion in the veins; and in the latter, that that congestion is removed. These form the exceptions to the rule, in which the *absolute* motion of venal blood may be either diminished or increased.

* I have said equal forces, because they may be so considered in the ordinary state of respiration.

† Vide Harv. de Mot. Sang. and Halleri Physiologia.

VOL. III. NO. 18.—NEW SERIES.

3 x

this precaution, we apprehend it has happened that the acute and ingenious Dr. Barry has been led to adopt a theory of venous circulation, alike repugnant to fact and legitimate reasoning.

I am, Sir, yours, &c.

Reading, Oct. 25, 1826.

II. *State of the Profession.*

‘ 1. If the Fellows have any advantage amongst the higher classes, (I mean the gentry of England,) this evidently arises from their being, for the most part, educated with, and early known to that class, and therefore, perhaps, being capable, on the whole, of a more ready assimilation to them in manner and feeling. Besides, we may allow that there may be a disposition amongst the Graduates of our own Universities to assist one another, arising from those early associations which, in every profession in England, connects together individuals who have had the same education. Now, if these be the true causes of the advantages which English Graduates seem to enjoy, it is evident that they would still possess them if the College of Physicians were extinguished, or if every practising physician were called a Fellow of the College. What, then, is to be gained by perpetually charging on that body the effects of a distinction in truth quite independent of it?—a distinction which, I am disposed to think, would not excite any jealousy on the part of the Licentiates, if it were not for the qualification known to be necessary for its attainment: I mean an English education leading to an English degree.

‘ 2. We have often heard lately of the monopoly of the College of Physicians; but I am sure you have too much justice to promote so groundless a clamour. The College licenses the Graduate of every University in Christendom who is found competent to practise, and places him, as to the privilege of acting as a physician, on an absolute equality with any of its Fellows. It only reserves, with some modifications, to the Graduates of the English Universities, certain executive offices (which are miserably paid) in the English College of Physicians; a reservation which appears to me to be neither unreasonable in itself, nor calculated to give to the Fellow any advantage over the Licentiate in practice, independently of the circumstances above mentioned.

‘ 3. Whether any change might be advantageously made in the mode of electing Fellows, is a question which I will not enter upon here. But I can say with truth, that there is no want of liberal feeling amongst the Fellows of the College upon this or any other point touching the good of the profession. I am satisfied, however, that should the Fellowship cease to be generally a mark of an English degree, it would cease to be a desirable object with many of those who are now anxious to obtain it.

‘ 4. Allow me to trouble you, in conclusion, with a few words on the subject of the hostility which is said to exist between the Fel-

lows and Licentiates, and to threaten some great disturbance in the profession. I cannot but deprecate such remarks as these, which appear to lead to no result whatever, except the excitement of useless jealousy between those who ought to live on good terms with each other. For I think it may be confidently said, that *as long as the College of Physicians persists in the liberal system of admitting the Graduates of every University in the world to practise physic, in all respects as freely as the Fellows (after an examination similar to that which is submitted to by English Graduates), it has nothing to apprehend, even in this enlightened age, from the opposition of any body of men whatever.*

‘SOCIUS.’

The above passage, contained in a letter to the editor of the London Medical and Physical Journal, and purporting to be the production of a Fellow of the College of Physicians, again induces us to offer some observations on the present state of the profession. It is certainly curious that it should have been written without the author's having perused our paper in a former Number; for we are unwilling to believe that any respectable individual of the profession, had he done so, would have omitted referring to it, when attempting to answer the arguments it contains. To us, however, this can signify nothing, personally uninterested as we are in the matter; neither on the same account are we inclined to notice the little courtesy that is displayed on the occasion by this Fellow of the College. We trust that this is no part of the *esprit du corps*. Before we remark upon the curious arguments of this writer, it is necessary to recall the attention of our readers to the object for which the College was founded. The sole purpose for which this Corporation was established was the defence of his Majesty's liege subjects from the practices of ignorant quackery, and *for none other*. There was no exclusion of Graduates of medicine from its privileges, from whatever University they might have obtained their degree. It had no reference to their place of education, nor to their general attainments; medical information, and medical information only, was the sole requisite for a member of the College. From this very circumstance it has happened that this institution has been regarded as the representative body of the profession, and that its officers have been naturally looked up to as the possessors of the highest *medical* attainments: but we have said, and we repeat it, that this reputation is not now deserved. It is notorious, that there are two classes of physicians at the present time, the one* possessing only general information, but retaining all the privileges of a medical College,—the other possessing only medical information, and excluded from those very privileges which seem peculiarly their right. We endeavoured to shew how such an anomaly might be rectified, without recurring to that system of radical reformation

* We speak of both classes in the aggregate. Both doubtless contain exceptions to the general fact.

which is so much to the taste of the present day, and by which even the medical profession has at length been infected.

We beg to state, in the outset, that we sincerely wish the College to continue its superintendence over the profession, and that nothing could possibly be farther from our intentions than an endeavour to excite or to maintain hostility between its different ranks. Conceiving that without emulation no high attainments would ever be made, and that to excite emulation rewards and honours are necessary, regarding in our profession the College of Physicians as the legitimate distributor of such honours, and that to fulfil this office with effect some changes were required, we endeavoured to awaken its governing members to a sense of their present situation, which appeared to us inconsistent with the object of their institution. We have avowed *our* object;—we have no particular predilection for our own plan, and provided the same end can be attained, we would not only yield our opinions, but co-operate in any other measures the beneficial tendency of which we could be convinced. At the same time, we repeat here what we have said before, that we look further than the mere science of the profession; and that we deem it a no less binding duty of the College to direct the moral tone of its members than to excite them to the cultivation of medical science. The distinction of Fellows and Licentiates is to us of little moment, excepting so far as it has a tendency to exalt or degrade men as members of the profession and of society.

We have heard of an old doctor of Oxford, who, when the degradations to which servitors are subjected in that University were discussed, dismissed the matter by a miserable pun,—‘they will get over them by degrees:’ this would have been well were the fact really so, but unfortunately it is not; the external man is indeed changed, but the mind rarely rises from that state of humiliation under which it has laboured in early life. Men must respect themselves to be capable of pursuing a generous, noble, and upright course through the world.

To us, the obstinate retention of the present distinctions of the College appears well calculated to abate, if not to destroy, this very necessary quality, *because the Licentiates deem themselves degraded*. It is in fact the feelings excited, and not the mere external circumstances, that are of so much importance in the government of mankind; the latter are only of consequence as they tend to improve or deteriorate the former. If, therefore, by any defence of the present regulations of the College, that sense of degradation could be taken away with which the Licentiates regard them, they might remain unaltered; but if this cannot be done, then only two plans are left for those who cannot become Fellows—either to refuse altogether the authority of the College, or to sink into a situation somewhat like that which was held by the literati of France before the revolution, and which unfortunately enrolled the ablest among the excitors of rebellion and anarchy,—they must consent to be inferior to men whom they at least equal, if they do not surpass, in information and

ability. We may seem to some to speak more seriously of this subject than it deserves, and many would treat the whole as the petty dispute of a petty corporation. But we cannot so think of it, because we cannot but regard it as more or less influential on society at large, and that the well-being of that very society is absolutely dependent upon the good government of its separate parts. Having thus endeavoured to state the general principles by which we have been guided in the discussion of this question, we shall offer some observations upon the passage that has excited the above remarks, and we have numbered the paragraphs for the convenience of reference.

1. It is most probable that Graduates of the English Universities would assist each other in the manner thus supposed; but if so, why keep up a distinction offensive in itself, and upon which, rightly or wrongly, the unequal division of practice may be charged? The distinction arising *naturally* from education and early association is far different both in kind and effect from such as are imposed by the narrow spirit of a corporate body. The last inference in this paragraph must be a mere matter of opinion. We would only ask, whether it is just that a distinction supposed *by the public* to require only medical acquirement, should be confined to those possessing an English degree?

2. We have already denied the justice of the accusation that the Fellows of the College possess a monopoly of practice. But neither can we nor they deny that they retain a monopoly of all those offices that immediately lead to an intercourse with the higher ranks of life. It is not the miserable pay that is the object of contention,—but it is the influence, and the almost certain professional emolument to which ‘certain executive offices’ lead, that have excited and will continue to excite jealousy. Nor, unless the Fellows are prepared to arrogate to themselves a superiority of medical talent, can they be considered as acting with good faith to the public, *whose trustees they are*, in excluding *all* Licentiates from ‘certain executive offices.’ Among the present Licentiates thus excluded, we find the following names:—Drs. Babington, Farre, Yelloly, Parry, Birkbeck, Roget, Gooch, Wilson Philip, &c. &c.!!!

3. Having already discussed this question, and guarded ourselves, we hope, from all mistake, we shall but repeat here our opinion, that attainments, and attainments only, ought to be the qualification of a Fellowship. Let these be as varied, as extensive as possible, but without reference to the place where they were acquired. This might perhaps make the Fellowships ‘less desirable’ to English Graduates, but if given only as the reward of talent and information, there would be no dearth of proper candidates.

4. This paragraph might have superseded all the former. We are assured by a Fellow of the College, that the Fellows are liberal, and that they have ‘nothing to apprehend, even in this enlightened age, from the opposition of any body of men whatever.’ If it be so, this Fellow has lost his labour; there was no necessity for defence,

when there was no attack to be feared. We would however recommend to his consideration the following passage from Lord Bacon's *Essay on Innovations*. It may perhaps induce him to peruse the whole. 'Surely every medicine is an innovation; and he that will not apply new remedies must expect new evils; for time is the greatest innovator; and if time of course alter things to the worse, and wisdom and counsel shall not alter them to the better,—what shall be the end? . . . They that reverence too much old times are but a scorn to the new.'

SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

- I. *Case of a Lady born Blind, who received Sight at an advanced Age, by the Formation of an Artificial Pupil.* By JAMES WARDROP, Esq., F.R.S. Edin., Surgeon Extraordinary to the King, &c. Read before the Royal Society, 15th June, 1826.

'As imperfections in the original structure of our organs of sense which are remediable by art are extremely rare, and as cases of successful operations on these organs essentially contribute to illustrate their functions, as well as to throw light on the operations and development of the human mind, the following instance of vision being imparted to a lady born blind, by an operation, at an advanced period of life, will, it is hoped, not be considered unworthy of being submitted to the consideration of the Royal Society.

'The case, besides establishing the curious physiological fact, that the nerve of the eye can remain fit to receive the impressions of external objects, though totally excluded for a long series of years from the performance of that function, claims a much higher interest in a philosophical point of view; some of the facts here detailed confirming in a remarkable manner what Berkeley had predicted of "a man born blind made to see," in the 79th section of his *New Theory of Vision*, published in the year 1709. He says, "a man born blind being made to see, would, at the first opening of his eyes, make very different judgments of the magnitude of objects intromitted by them from what others do. He would not consider the ideas of sight with reference to, or as having any connexion with, the *idea* of touch." It may also be observed, that in the present case the blindness was more complete, and the period at which vision was acquired was much later in life, than in any instance which has hitherto been recorded.

'The lady whose case forms the subject of this paper, was observed, during the first months of her infancy, to have something peculiar in the appearance of her eyes, and an unusual groping manner, which made her parents suspect that she had defective vision. When about six months old, she was placed under the care

of a Parisian ocalist, who performed an operation on both her eyes, with a view to afford her sight. The operation on the right eye was, however, followed by violent inflammation, and a collapse of the eye-ball, thus causing a complete destruction of the organ of vision. The operation on the left eye, though equally unsuccessful in attaining its object, was not followed by any alteration in the form and size of the globe. From the account stated by her friends, it was impossible to form any correct notion of the state of her eyes previous to the operations which were performed. It seems, however, extremely probable, that the blindness, which was attempted to be remedied, had been produced by congenital cataracts, and that these operations had for their object the removal of the opaque lenses.

‘ From the above early period she had continued totally blind, being able merely to distinguish a very light from a very dark room, but without the power to perceive even the situation of the window through which the light entered; though in sunshine or in bright moonlight, she knew the direction from whence the light emanated. With regard, therefore, to the degree of sight, this lady was more completely blind than the boy in the celebrated case related by Mr. Cheselden, in the 35th volume of the *Transactions of the Royal Society*; for in that instance the boy knew black, white, and scarlet apart from one another; and when in a good light he had that degree of sight which generally continues in an eye affected with cataract; whereas in this lady, the pupil being completely shut up, no light could reach the retina, except such rays as could pass through the substance of the iris.

‘ When she was placed under my care she had reached her forty-sixth year. The right eye-ball was collapsed, but the left retained its natural globular form. The cornea of this eye was transparent, except at one point near its circumference, where there was a linear opacity, which had probably been the cicatrix of the wound made during the operation in her infancy. The anterior chamber of the eye was of its natural capacity; but I could not distinguish any vestige of a pupil, some streaks of yellow lymph being deposited in an irregular manner over the central part of the iris. There was every reason to believe that the retina was sound; for though she could not perceive objects, nor had any notion of colours, yet the circumstance already mentioned of her being able to distinguish between a very light and a very dark chamber, and between a gloomy day and a sunshine, rendered it probable that the nerve was in a sound and natural state. Under this impression, I thought that the restoration of her sight by making an artificial pupil was practicable, and certainly well worthy of a trial. Accordingly, on the 26th of January, I introduced a very small needle through the cornea, passing it also through the centre of the iris; but I could not destroy any of the adhesions which had shut up the pupillar opening. After this operation she said she could distinguish more light, but she could perceive neither forms nor colours. The result of this first attempt justified the favourable views entertained of the

state of the retina; and Mr. Lawrence, who at this time was consulted, coincided with me in this opinion.

‘ On the 8th of February a second operation was performed, which consisted in passing a sharp-edged needle through the sclerotica, bringing its point through the iris into the anterior chamber, repassing it into the posterior chamber at a small distance, and then dividing the portion of iris thus included between the two perforations of the needle. Only a very slight inflammation followed—the light became offensive to her—she complained of its brightness, and was frequently observed trying to see her hands; but it was evident her vision was very imperfect; for although there was an incision made in the iris, some opaque matter lay behind this opening, which must have greatly obstructed the entrance of light.

‘ On the 17th of February a third operation was performed, which consisted in still further enlarging the opening in the iris, and in removing the opaque matter, by a needle introduced through the sclerotica. This was followed by a very slight degree of redness. The operation being performed at my house, she returned home in a carriage, with her eye covered only with a loose piece of silk, and the first thing she noticed was a hackney coach passing, when she exclaimed, “What is that large thing that has passed by us?” In the course of the evening she requested her brother to shew her his watch, concerning which she expressed much curiosity, and she looked at it a considerable time, holding it close to her eye. She was asked what she saw, and she said there was a dark and a bright side; she pointed to the hour of twelve, and smiled. Her brother asked her if she saw any thing more? she replied, “Yes,” and pointed to the hour of six, and to the hands of the watch. She then looked at the chain and seals, and observed that one of the seals was bright, which was the case, being a solid piece of rock crystal. The following day I asked her to look again at the watch, which she refused to do, saying, that the light was offensive to her eye, and that she felt very stupid; meaning that she was much confused by the visible world thus for the first time opened to her. On the third day she observed the doors on the opposite side of the street, and asked if they were red, but they were in fact of an oak colour. In the evening she looked at her brother’s face, and said that she saw his nose; he asked her to touch it, which she did; he then slipped a handkerchief over his face, and asked her to look again, when she playfully pulled it off, and asked, “What is that?”

‘ On the sixth day, she told us that she saw better than she had done on any preceding day; “but I cannot tell what I do see; I am quite stupid.” She seemed, indeed, bewildered from not being able to combine the knowledge acquired by the senses of touch and sight, and felt disappointed in not having the power of distinguishing at once by her eye objects which she could so readily distinguish from one another by feeling them.

‘ On the seventh day she took notice of the mistress of the house in which she lodged, and observed that she was tall. She asked what the colour of her gown was? to which she was answered, that

it was blue; "so is that thing on your head," she then observed; which was the case: "and your handkerchief, that is a different colour;" which was also correct. She added, "I see you pretty well, I think." The teacups and saucers underwent an examination: "what are they like?" her brother asked her. "I don't know," she replied; "they look very queer to me; but I can tell what they are in a minute when I touch them." She distinguished an orange on the chimney piece, but could form no notion of what it was till she touched it. She seemed now to have become more cheerful, and entertained greater expectation of comfort from her admission into the visible world; and she was very sanguine that she would find her newly-acquired faculty of more use to her when she returned home, where every thing was familiar to her.

'On the eighth day, she asked her brother, when at dinner, "what he was helping himself to?" and when she was told it was a glass of port wine, she replied, "port wine is dark, and looks to me very ugly." She observed, when candles were brought into the room, her brother's face in the mirror, as well as that of a lady who was present; she also walked, for the first time without assistance, from her chair to a sofa which was on the opposite side of the room, and back again to the chair. When at tea, she took notice of the tray, observed the shining of the japan work, and asked "what the colour was round the edge?" she was told that it was yellow; upon which she remarked, "I will know that again."

'On the ninth day she came down stairs to breakfast in great spirits; she said to her brother, "I see you very well to-day;" and came up to him and shook hands. She also observed a ticket on a window of a house on the opposite side of the street ("a lodging to let"); and her brother, to convince himself of her seeing it, took her to the window three several times, and to his surprise and gratification, she pointed it out to him distinctly on each trial.

'She spent a great part of the eleventh day looking out of the window, and spoke very little.

'On the twelfth she was advised to walk out, which recommendation pleased her much. Mr. ——— called on her, and she told him she felt quite happy. Her brother walked out with her as her guide, and took her twice round the piazzas of Covent Garden. She appeared much surprised, but apparently delighted; the clear blue sky first attracted her notice, and she said, "it is the prettiest thing I have ever seen yet, and equally pretty every time I turn round and look at it." She distinguished the street from the foot pavement distinctly, and stepped from one to the other like a person accustomed to the use of her eyes. Her great curiosity, and the manner in which she stared at the variety of objects, and pointed to them, exciting the observation of many by-standers, her brother soon conducted her home, much against her will.

'On the thirteenth day nothing particular took place till tea-time, when she observed that there was a different tea-tray, and that it was not a pretty one, but had a dark border; which was a correct description. Her brother asked her to look in the mirror,

and tell him if she saw his face in it? to which she answered, evidently disconcerted, "I see my own; let me go away."

'She drove in a carriage, on the fourteenth day, four miles on the Wandsworth road; admired most the sky and the fields, noticed the trees, and likewise the river Thames as she crossed Vauxhall bridge. At this time it was bright sunshine, and she said something dazzled her when she looked on the water.

'On the fifteenth day, being Sunday, she walked to a chapel at some distance, and now evidently saw more distinctly, but appeared more confused than when her sight was less perfect. The people passing on the pavement startled her; and once when a gentleman was going past her, who had a white waistcoat and a blue coat with yellow buttons, which the sunshine brought full in her view, she started so as to draw her brother, who was walking with her, off the pavement. She distinguished the clergyman moving his hands in the pulpit, and observed that he held something in them; this was a white handkerchief.

'She went in a coach, on the sixteenth day, to pay a visit in a distant part of the town, and appeared much entertained with the bustle in the streets. On asking her how she saw on that day? she answered, "I see a great deal, if I could only tell what I do see; but surely I am very stupid."

'Nothing particular took place on the seventeenth day; and when her brother asked her how she was? she replied, "I am well, and see better; but don't tease me with too many questions, till I have learned a little better how to make use of my eye. All that I can say is, that I am sure, from what I do see, a great change has taken place; but I cannot describe what I feel."

'Eighteen days after the last operation had been performed, I attempted to ascertain by a few experiments, her precise notions of the colour, size, forms, position, motions, and distances of external objects. As she could only see with one eye, nothing could be ascertained respecting the question of double vision. She evidently saw the difference of colours; that is, she received and was sensible of different impressions from different colours. When pieces of paper, one and a half inch square, differently coloured, were presented to her, she not only distinguished them at once from one another, but gave a decided preference to some colours, liking yellow most, and then pale pink. It may be here mentioned, that when desirous of examining an object, she had considerable difficulty in directing her eye to it, and finding out its position, moving her hand, as well as her eye, in various directions, as a person when blindfolded, or in the dark, gropes with his hands for what he wishes to touch. She also distinguished a large from a small object, when they were both held up before her for comparison. She said she saw different forms in various objects which were shewn to her. On asking what she meant by different forms, such as long, round, and square, and desiring her to draw with her finger these forms on her other hand, and then presenting to her eye the respective forms, she pointed to them exactly; she not only distinguished small from

large objects, but knew what was meant by above and below ; to prove which, a figure drawn with ink was placed before her eye, having one end broad, and the other narrow, and she saw the positions as they really were, and not inverted. She could also perceive motions ; for when a glass of water was placed on the table before her, on approaching her hand near it, it was moved quickly to a greater distance, upon which she immediately said, " You move it ; you take it away."

' She seemed to have the greatest difficulty in finding out the distance of any object, for when an object was held close to her eye she would search for it by stretching her hand far beyond its position, while on other occasions she groped close to her own face for a thing far removed from her.

' She learned with facility the names of the different colours, and two days after the coloured papers had been shewn to her, on coming into a room the colour of which was crimson, she observed that it was red. She also observed some pictures hanging on the red wall of the room in which she was sitting, distinguishing several small figures in them, but not knowing what they represented, and admiring the gilt frames. On the same day she walked round the pond in the centre of St. James's Square, and was pleased with the glistening of the sun's rays on the water, as well as with the blue sky and green shrubs, the colours of which she named correctly.

' It may be here observed, that she had yet acquired by the use of her sight but very little knowledge of any forms, and was unable to apply the information gained by this new sense, and to compare it with what she had been accustomed to acquire by her sense of touch. When, therefore, the experiment was made of giving her a silver pencil case and a large key to examine with her hands, she discriminated and knew each distinctly ; but when they were placed on the table, side by side, though she distinguished each with her eye, yet she could not tell which was the pencil case and which was the key.

' Nothing farther occurred in the history of this lady's case worthy of notice, till the twenty-fifth day after the operation. On that day she drove in a carriage for an hour in the Regent's Park ; and on her way there seemed more amused than usual, and asked more questions about the objects surrounding her, such as " what is that ?" it is a soldier, she was answered ; " and that, see ! see !" these were candles of various colours at a tallow chandler's window. " Who is that that has passed us just now ?" it was a person on horseback : " but what is that on the pavement, red ?" it was some ladies who wore red shawls. On going into the Park, she was asked what she saw particularly, or if she could guess what any of the objects were. " Oh, yes," she replied, " there is the sky ; that is the grass ; yonder is water, and two white things ;" which were two swans. On coming home along Piccadilly, the jewellers' shops seemed to surprise her much ; and her expressions made those around her laugh heartily.

' From this period till the time of her leaving London on the 31st of March, being forty-two days after the operation, she continued almost daily to gain more information of the visible world; but she had yet much to learn. She had acquired a pretty accurate notion of colours, and their different shades and names; and when she came to pay me a farewell visit, she then wore a gown, the first of her own choice, with the light purple colour of which she seemed highly gratified, as well as with her cap, which was ornamented with red ribands. She had not yet acquired any thing like an accurate knowledge of distance or of forms; and up to this period she continued to be very much confused with every object at which she looked. Neither was she yet able, without considerable difficulty and numerous fruitless trials, to direct her eye to an object; so that when she attempted to look at any thing, she turned her head in various directions until her eye caught the object of which it was in search. She still entertained, however, the same hope which she expressed soon after the operation, that when she got home her knowledge of external things would be more accurate and intelligible, and that when she came to look at those objects which had been so long familiar to her touch, the confusion which the multiplicity of external objects now caused, would in a great measure subside.'—(*Anderson's Quarterly Journal of the Medical Sciences for October.*)

We had not had an opportunity of reading this account when our remarks upon Dr. Spurzheim's letter were written. We have now inserted it at length, that our readers may be enabled to judge of the accuracy of our inferences for themselves. To us, it seems thoroughly to overthrow Dr. Spurzheim's hypothesis.—EDITORS.

II. *Upon the Treatment of Syphilis without Mercury, with reference to the Experiments lately made in Great Britain.* By Dr. FERDINAND WILHELM BECKER, of Berlin. Translated from a Paper in the *Archiv. fur Medizinische Erfahrung*, &c. Von Dr. HORN, &c., for Jan. and Feb. 1826.

(Concluded from page 357.)

' THIS historical review appears to prove, first, that the treatment of syphilis without mercury was long ago in general use; and, secondly, that the characteristic appearances which are sought for in modern times, and to which the application of mercury has been confined, are by no means well marked; and, lastly, that very erroneous opinions are entertained on this most important subject.

' To decide the question, whether or not a specific disease does exist incurable without mercury, it will be necessary to answer the following questions:—

' 1st.—Is it possible to heal primary syphilitic sores without mercury? what are the necessary conditions of such cure? and in what relation as to quickness and security does the disease so treated stand, compared with the same disease treated with mercury?

‘ 2d.—Can we, by the proper management of mercury, certainly prevent the appearance of secondary syphilitic symptoms ?

‘ 3d.—Is the occurrence of secondary symptoms constant, at least more frequent in cases treated without, than in those treated with mercury ?

‘ 4th.—How do the secondary symptoms ensuing after the different modes of treatment stand with regard to each other as to their form and obstinacy ?

‘ 5th.—Supposing the secondary symptoms in either case to be curable without mercury, are they healed as quickly and as securely when this remedy is not, as when it is employed ?

‘ The possibility of healing every primary syphilitic sore without mercury is a matter of too common experience to require proof. Every surgeon has seen instances where such sores, altogether neglected by the patient, have healed without the employment of any remedies whatever; and Boerhaave, Girtanner, and Rust, have long ago recommended a non-mercurial local treatment.

‘ Hitherto the experience of the surgeons in Great Britain has met with no symptom which has not been observed in former times; and with regard to the influence of local treatment, I think that it may be positively asserted, that the celerity and permanency of the cure has a strict relation to the attention paid to rest, cleanliness, and the abstraction of stimulating food.

‘ Those English surgeons who do not give mercury in the primary sores, which is, however, contrary to the common practice in that country, recommend rest, in an horizontal position, to their patients, and abstinence. In the military hospitals this practice has been very successful; they consider also complete rest as absolutely necessary for the success of the non-mercurial treatment,—while, if mercury is administered, the patient may securely continue his common occupation; and hence, therefore, that the former method is altogether inapplicable to private practice, where the individual cannot be retained under sufficient control. In Germany, however, rest is not deemed so essential; and all our best-informed surgeons regard mercury as an uncertain and dangerous remedy, and improper unless called for by very particular circumstances. Rest, nevertheless, is very beneficial; and from the reports of the various hospitals, buboes appear very rarely to have occurred where it has been thoroughly maintained.

‘ That these sores will heal, without any local treatment, the experience of many hospitals where mercury has been employed either internally or by friction, most amply proves. I have frequently seen such sores heal by bathing with warm water only, in the practice of Kern, at Vienna, the dietetic plan being at the same time pursued. Cold water has also been employed successfully at Edinburgh; while Brünninghausen and Handselucher confine the local treatment to the application of dry charpies, enforcing at the same time rest and an antiphlogistic diet, and carefully abstaining from the exhibition of mercury.

‘ In the British military hospitals, stimulating metallic lotions are

universally preferred; such as solutio plumbi acetatis, solutio zinci sulphatis, solut. cup. sulph., liq. calcis cum calomelane, &c. Which of these applications is the most valuable, there are not at present sufficient data for enabling us to judge. In the different regiments where I have seen these various washes used, I have not observed any remarkable difference in the healing of the sores. Doctor Thomson, whose experience in public and private practice is very extensive, recommends that the application should be changed from time to time; as after a sore has become accustomed to a stimulus, it becomes likewise insensible to it, and a somewhat stronger is required. I believe, however, myself, that the solution of nitrate of silver is one of the best, if not the very best application; and under its use, primary sores more rapidly heal than from any other remedy.'

The second question, the author of this essay does not attempt to answer,—but exposes at some length the great difficulty of arriving at a satisfactory conclusion. It must certainly be entirely decided by experience, whether or not the occurrence of secondary symptoms are more surely prevented by the mercurial than the non-mercurial treatment; but it is almost impossible to obtain such experience as shall leave the inferences thoroughly free from doubt.

'The third quære is equally important with the second, and can be more easily answered; the quære is, whether secondary symptoms are not more frequent without than with the mercurial treatment?

'From the reports of the surgeons who employed mercury in the management of syphilis, Sir James Macgregor states the occurrence of secondary symptoms to be 1 in 55½, a return much more favourable than is afforded by the non-mercurial treatment. It is, however, to be remembered, that all the surgeons from whose reports this result has been obtained were firm believers in the prophylactic power of mercury, consequently admitted with great reluctance the existence of a constitutional lues after its exhibition, and referred the appearances to some other source of disease. That this is not a groundless supposition, I well know from my own observation both in the military hospitals and in other places. It is worthy of note, that Sir James Macgregor mentions one regiment, in which among sixty-eight cases of genuine syphilis in which mercury was not given, not one exhibited secondary symptoms.

'The proportion of secondary symptoms, when no mercury is employed, is given by the same author, as 96 : 1940 = 1 : 20½; in one regiment 1 : 24. By Hennen, 46 : 407 = 1 : 8¾; by Hill, 19 : 239 = 1 : 13; by Thomson, as derived from his own extensive observation, 1 : 12 — 15.

'That this number may not appear very unfavourable to the simple treatment of syphilis, it should be considered, that every case, however unimportant in itself, has been registered by the surgeon, and has been ascribed, without reflecting upon the consequences, to a syphilitic origin; an impartiality not easily to be surpassed, but

which, by giving the numbers only, without any notice of the concomitant circumstances, has militated in no small degree against the adoption of the simpler practice.

My next inquiry concerns the difference in the forms and obstinacy of the secondary symptoms under the different circumstances.

* Sir James Macgregor, from a comparison of 147 cases, infers that the secondary symptoms that succeed the employment of mercury are far more severe, and more difficult of treatment, than when that mineral has not been used.

* Hill observed in the affection of the fauces only inflammation and excoriation or aphthæ of the mucous lining; among diseases of the skin, the different classes of Bateman, papulæ, squamæ, pustulæ, exanthemata; and he observed some cases of periostitis and iritis. Hill's cases were treated without mercury. Hennen reports as secondary symptoms, under similar circumstances, tubercles, exanthemata, pustulæ, squamæ, iritis, periostitis, and sore throat; upon the nature and obstinacy of this latter affection he has made no remark; and I am inclined to believe that he has comprehended aphthæ under this head.

* The extensive experience of Thomson has been attended with similar results. In a practice of many years, he has never, after simple treatment, met with either deeply-ulcerated throats, malignant external sores, or caries either in the skull, the nares, the palate, or the long bones. During the three years that I attended the military hospital at Edinburgh, many patients were treated both with and without mercury. Among the last, I never saw any malignant symptom; the appearances that have been described by Hill as frequently following the simple treatment, were common enough, such as unimportant eruptions, rheumatic pains, inflammations of the mucous membrane of the mouth and throat, attended sometimes with redness and swelling only; at other times passing into excoriations or exciting aphthæ and iritis. The great mildness of these affections was so general, compared with the secondary symptoms where mercury had been employed, that we were enabled by the character of the disease to recognise the previous treatment; nor were we ever deceived.

* The last question concerns the curableness of the secondary symptoms when they do occur; and whether mercury is necessary to remove them.

* This question Dr. Becker answers generally in the affirmative; *i. e.* that all secondary symptoms are curable without mercury. At the same time, he distinguishes between those cases where in the primary sores the mineral was employed, and those in which a simple antiphlogistic treatment was followed. According to the reports of different authors and the observations of Dr. Becker himself, the secondary symptoms consequent to the last plan are far more manageable than those consequent to the former; and even syphilitic iritis is successfully treated by local and general bleeding without mercury, in the practice of Dr. Thomson. The

secondary symptoms consequent to the employment of mercury, though curable for the most part in the same manner, are yet frequently very difficult to manage, as they are certainly more severe.'

We have much curtailed the latter part of this paper, but without omitting any material fact; and we believe that, if the evidence above quoted is really trustworthy, our readers will be inclined with the author to prefer the non-mercurial treatment in every case. Our own experience is entirely against a very free exhibition of mercury. From mild courses of this mineral we have frequently derived great advantage; but we have always endeavoured to prevent salivation. If, indeed, the symptoms do not yield before this happens, it is probable that perseverance will be only injurious; for the mercurial disease is unquestionably both more dangerous and more unmanageable than syphilis.

III. *Circulation in the Spleen.*

M. ANDRAIS, fils, informed the Académie of a discovery he had made in the structure of the spleen in the horse. The blood passes from the splenic artery into the spongy tissue of the organ, by cribriform openings in the sides of the vessels, and enters the veins by similar openings in their parietes. He exhibited preparations confirming this statement.

IV. *Examination of the Body of the celebrated TALMA.*

THE disease of this very admirable actor and excellent man appears to have been very obscure, and to have given rise to much controversy respecting its nature. Some (*physiologistes à outrance*) ultra physiologists attributed all his symptoms to a gastro-enteritis; others, with much more reason, considered that the nausea, vomiting, swelling, and sensibility of the abdomen, proceeded from some obstruction in the course of the intestinal canal, and feared that the obstruction was insurmountable. The examination was made by M. Breschet, in the presence of MM. Biett, Dupuytren, Tonquier, Broussais, Bourdois de la Motte, &c., and fully corroborated the latter opinion. There was a cellulose-fibrous contraction of the rectum, with complete obliteration of the tube, about six inches above the rectum. The intestine, enormously distended above the contraction, was gangrenous, and a perforation existed at the anterior part, through which fæculent matter had escaped. The whole intestinal canal was distended with gas and 'matières.' There was some redness on the external and internal coats of the small intestine and stomach; the latter was empty and collapsed. The organic lesion had originated long before the disease which induced death: for though Talma had appeared to enjoy good health, he had for many years experienced pain in evacuating the rectum. Often when he imagined himself to have had a copious dejection, it was found, on examination, that gas, with a little liquid matter, only had escaped.

Another circumstance was observed, well worthy of remark, viz. an aneurismal tumour at the apex of the heart. This tumour, black and filled with layers of concrete fibrine, had been formed by successive infiltration of blood across the fibres of the left ventricle, which was extraordinarily altered and thinned. It was the size of a pigeon's egg, its parietes were formed by some of the atrophied muscular fibres, and by the serous membrane of the pericardium, the two layers of which adhered to each other. The internal lining of the heart had been unquestionably burst or eroded at the correspondent point.

The editor of the *Nouvelle Bibliothèque Médicale* appears to regret that Talma had not died upon the stage from the bursting of this tumour, as then it might have been said, 'Talma, comme Molière, eût expiré sur le théâtre de sa gloire.' The mere supposition, however, has given the editor an opportunity of rounding a sentence, and this perhaps may satisfy him. It does not appear that any suspicion of such a disease existing had been entertained during life.

V. *Sulphate of Quinine administered by Frictions.*

M. POINTE, a physician at Lyons, has proposed to give the sulphate of quinine by rubbing it upon the mucous membrane of the gums and lips. In support of this plan, he has reported nine cases of remittent and intermittent fevers that were cured by it. The quantity employed was from four to eight grains night and morning. The only inconvenience is stated to be the extreme bitterness of this medicine. M. Pointe suggests this method of giving the sulphate to those whose stomachs are irritable.

This memoir excited considerable discussion in the Académie, and M. Miguel, disagreeing with the author in calling his cases 'gastro-enteritis,' finds additional proof that quinquina is not a *revulsione*, but acts in an unknown, but specific manner. M. Louyer Villermay mentions the case of a child attacked by gastro-enteritis and periodic fever, in whom the internal exhibition of the sulphate of quinine constantly excited gastric irritation. The most sensible observation in this discussion was made by M. Lévillé. He asked if a part of the salt might not have been swallowed? and if this portion might not have been the efficient agent? Of course he was answered in the negative. Our neighbours have certainly a happy art in attaching themselves to trifling as earnestly as to serious things: it is not, however, exactly the first part of their character that we wish to see imitated by our own countrymen.

VI. *Application and Management of Blisters.*

WE are indebted to M. Robiquet for having demonstrated, that the vesicating principle of cantharides is very soluble in oily or fatty bodies (*dans les corps gras*). I was led, in consequence of his analysis, to employ blisters slightly moistened with oil; and I soon found that by this means their action was rendered more prompt, more energetic, and not sensibly diminished even by the

interposition of a covering of paper, which is easily penetrated by the active principle of the solution. This mode of application, which is, I believe, common in England, seems to have been adopted with the intention of attenuating the effects of the blister; but its real effect is to render the action of the blister quicker and more certain: its principal advantage, however, is, that it renders the direction of the blister more manageable.

‘The epidermis not being in contact either with the powder of cantharides or with the plaster, is left free, and does not adhere inconveniently when we wish to remove the blister. It is thus easy to prevent the redness of the true skin, avoiding on the one hand the influence of the air, and on the other the prolonged action of particles of the vesicating substance, which, in the ordinary method, are so difficult to remove. I have already said, that the inflammatory redness of the true skin, far from acting in the same way as a superficial vesication, may aggravate the inflammation we wish to subdue. For the same reason, the serum should be let out by small punctures, by which we gain also the additional advantage of avoiding the yellow tinge of the skin sometimes left by blisters, but never where the true skin has not been inflamed.

‘It is necessary carefully to avoid employing too great a proportion of oil, which, by running over the skin, may occasion a subsequent and more extensive vesication. In ordinary cases, six or seven hours suffice to produce a decided effect. Indeed, when we strictly wish to limit the action of the blister to a simple vesication, we must not wait for the separation of the epidermis before removing the blister; for if the surface is only wrinkled, the process will be continued afterwards.

‘During the six years in which I have been in the habit of pursuing the above method at the general hospital, the most extensive vesications thus produced have not in a single instance produced ischuria.’—(*Bretonneau on Diphtheritis.*)

VII. *Rupture of the Aorta.*

‘M. LARREY presented a preparation to the Section of Surgery of the Académie Royale, in July, taken from the body of a man who died in consequence of a fall. In this preparation the aorta is seen ruptured near the origin of the arteria innominata: seven or eight pounds of blood were found poured into the right side of the chest. (*The French pound consists of sixteen ounces.*) The subject of this accident survived the injury fifty-two hours.’—*Biblioth. Méd.*

VIII. *Extract from the Clinical Report of M. Bally's Cases at La Pitié.*

‘ERYSIPELAS.—The cases of erysipelas were simple. The natural method of practice alone was employed, without any inconvenient consequences: and it cannot be doubted, that many practitioners have made an improper use of tartar emetic in erysipelas, in consequence of considering it merely dependent on the state of the

stomach: its only utility is to destroy such a complication. In no case was the progress of the disorder arrested by evacuations of the *primæ viæ*. Simple erysipelas must have its course: the mucous state of the tongue is often not an indication of a true gastric affection. M. Bally speaks even more decidedly concerning sanguineous evacuations, which, in his opinion, are not only useless, but, as he is convinced after much consideration of numerous facts, injurious: and this conviction becomes stronger by every day's experience. It is in vain, he observes, that theory murmurs at this assertion; experience confirms its truth: and he wishes those who would be convinced of it, to keep an accurate register of cases of erysipelas of the face, distinguishing those treated by evacuations of blood from those treated by expectation, or the *méthode expectante*; and assures them they will find that the number of cures will not only be greater in the latter, but also that the duration of the disorder will be found to be less. There are cases of erysipelas in which the meninges are affected: even in this we may try to do much by antiphlogistic means, but we shall not succeed better in that way, than by a mild and simple treatment, without either bleeding or leeches.

Rubeola.—Rubeola has been frequent, but always mild, and cured by the efforts of nature. The inutility of emetics was shewn in many of the cases. In one case, where the disease had not its usual character, and the form and colour of the eruption were irregular, there being also diarrhœa, and severe bronchitis with bloody expectoration, the patient was snatched from certain danger by the application of a number of dry cupping-glasses to the chest, which produced an erythema of the whole thorax. An attempt was made to study the relation existing in regular rubeola between the affection of the skin and the state of the intestinal canal. In several cases, when the disease ran its natural course, diarrhœa appeared in the beginning, as well as cough, doubtless by an extension of the affection: and we should not, in such cases, too readily receive the idea of a true complication of bronchitis or enteritis. Constipation soon succeeded, and lasted to the end of the disorder, as long as the morbid action was directed to the skin. Sometimes, towards the end, there were liquid stools: at this period the skin, though freed from the inflammatory state, is slightly denuded, and consequently more sensible to the impression of the external air: it cannot, therefore, perfectly perform its functions, and the intestinal tube supplies its place. In a short time afterwards, the equilibrium was generally restored without assistance: where the diarrhœa continued, it was more than once attributable to the too prolonged exhibition of mucilaginous medicines, which were probably given to suppress it, as it is too generally looked upon as a pathognomic symptom of an enteritis. It is thus easy to understand why the administration of one or more doses of purgative medicine when rubeola is going off, which some physicians are in the habit of resorting to, should be so objected to by others. At Paris, this practice is far less common

than formerly: but whatever doubt may be entertained on this subject, the practice is not less vindicated by experience than by popular custom.

‘ Variola. — In the fatal cases of variola, examination after death has shewn marks of the death having been occasioned by an actual asphyxia; congestion of the brain and its membranes; considerable pulmonary engorgement. In some parts of the lungs there were traces of inflammation. The larynx and the trachea were of a reddish brown colour, and studded with variolous pustules, or rather with the remains of such as were ruptured: scarcely in any case had the eruption passed the bifurcation: once only we remarked them half an inch lower: the larynx was always most deeply affected, both with pustules and with inflammation, and in proportion as we approach the bronchi, the disorder gradually becomes less manifest.

‘ Intermittent Fever. — M. Bally pointed out to the pupils, that almost all the patients affected with intermittent fever came from the country, or worked in the gardens of Paris. They were all cured, without any relapse, by the sulphate of quinine, gradually increased to the dose of twelve or sixteen grains; and continued for some time after the cessation of the attacks, in doses progressively decreased. The patients were not prepared for this treatment by evacuations or by bleeding, and no inconvenience followed. M. Bally thinks that nothing is more useless, or rather more dangerous, than to wait until several paroxysms have taken place. If we could avoid, he says, frequent relapses, obstructions of the spleen, or those visceral inflammations which are the consequence of numerous relapses, we must *put down* the disease promptly, by large doses of cinchona. The following case merits the appellation of pleuritic intermittent fever, and is an additional proof of the general influence of the season:—

‘ Etienne Dongois, labourer, aged sixty, living at La Chapelle, near Saint Denis, after the fatigues of the day, found himself seized suddenly with shivering of the whole body, followed by heat and perspiration. From that time he had paroxysms of a tertian fever, which only differed from the first in the circumstance of being accompanied, during the shivering only, with acute pain in the middle of the left side of the chest. During the intermission, the pain was never felt, and he took his meals as usual. After having four paroxysms, and having taken no medicine, he determined, on the 10th of May, to come to La Pitié. The presence of the above symptoms was ascertained: intensity of pain in one point of the pleura, in the first attack after his admission: thirst during the paroxysm only. No appearance of derangement of the stomach; the tongue nearly natural. Two or three loose dejections on the day of the fit; the bowels more confined during the apyrexia: no pain of bowels. The sulphate of quinine was given on the first intermission, on the third day after his arrival. The accession and the pain were weakened, but not overcome: but after the third administration, every symptom disappeared. The medicine was con-

tinued, in doses gradually diminished, until the 16th of May; and on the 17th the patient was discharged, free from complaint.— (RIBES, *Revue Médicale*, Septembre.)

IX. Amputation of the Neck of the Uterus.

* THE patient on whom M. Lisfranc performed this operation, on account of a cancerous affection, was not long ago presented by him to the Section of Surgery for examination. The neck of the uterus was found to have nearly re-assumed its natural conformation, but to be somewhat shorter than natural. There are no symptoms of a return of the disorder?—(Rev. Méd.)

X. Case of Ovarian Dropsy.

THE following case is chiefly interesting as an illustration of the difficulty of distinguishing this affection during the life of the patient. It is related in *Milano Giorn. Crit. di Medici Analitic*, and copied into the French journals.

* Madame Fernandez, a stout woman, of the lymphatico-sanguine temperament (if our readers know what that is), having had perfect health until she reached the age of twenty-eight, began to feel a kind of weight of the womb, with pains in the loins and in the thighs, particularly on the left side; menstruation continued regular, and in the interval was often succeeded by leucorrhœa. On examination, the neck of the uterus was found enlarged. By means of general bleeding, leeches, warm baths, and, the following year, sea-bathing, her health became apparently quite re-established. A year afterwards, the patient began to complain of pains in the vagina and in the iliac region, in which a round tumour was readily perceived. No affection of the uterus was recognised, and leeches only were ordered.

* Her physicians differed respecting the nature of the affection, and could not determine whether it was mesenteric engorgement, a tumour of the omentum, or a tumour of the left ovary: Scarpa, who was consulted, was of the latter opinion: but all agreed that it was a scrofulous affection, against which they considered that antiphlogistic measures would be improperly employed. Consequently, antimonials, mercurial medicines, sarsaparilla, conium, aconitum, muriate of barytes, iodine, squill, sea-bathing, &c. were alternately advised.

* The tumour increased, and was accompanied with ascites. Puncturing (of the abdomen) was performed seven times: and after each time the tumour was found to increase rapidly and considerably. At last there was hardly any space left to perform the operation without injuring the enormous tumour, which was supposed to be steatomatous or lardaceous. Its size became more and more inconvenient; the legs became œdematous; the patient could only lie on an inclined plane, and could not turn herself; cramps and pains of the legs were frequent; the tumour could not be suspended, and when the patient sat down, the thighs were

almost covered by it; the pulmonary circulation became more and more oppressed, and after five years of suffering the patient died.

‘ On examination after death, the body was not found to be much emaciated: the legs were oedematous; the features very little altered; the colour of the face a reddish purple. The whole cavity of the abdomen seemed filled with the tumour: the viscera were healthy, but much decreased in volume. The vagina and womb were drawn upwards, so as to form a cone, and the neck of the womb was not perceptible: the womb, however, had not been affected by disease, for menstruation had been regular to the last. The tumour adhered slightly to the abdominal parietes; its only firm adhesion was to the cyst.

‘ The tumour was formed of more than forty cysts, varying in size from the bigness of a walnut to that of the head of an adult: these contained fluid, varying in consistence and colour from that of limpid water to a thick, red, and even brown fluid. In the small or transparent cysts, the envelop resembled a serous covering; in the more voluminous, it was thick, and resembled a mucous membrane; sometimes, in the interior, traces of false membranes were found.’

It is needless to criticise the treatment in the above case: under all modes of treatment it would probably have been fatal; but there can be little doubt that measures, which do not seem to have been employed, might have been devised to decrease the patient's sufferings, and to prolong her life.

XI. Observations on a Case of Ruptured Tendo-Achillis, and the Method adopted for its Cure. By W. E. HORNER, M.D.
Adjunct Professor of Anatomy in the University of Pennsylvania.

‘ THOUGH disinclined, on common occasions, to attempt the establishment of general inferences from partial experience, I am induced to lay aside this salutary reserve, from the subject of the present communication not being one of those, where a few years' delay promises to a single individual much gain from the stores of his own experience. Moreover, as the accident itself is not a very common one in this country, and the precise condition of the patient alluded to is much less so, I may perhaps be excused for communicating an insufficiently tested plan of practice, in consequence of a desire to incite others to a similar course, as occasion offers, in case of the usual means failing; because, by thus collecting experience, we shall sooner ascertain the positive value of the hint thus thrown out.

‘ James Lang, aged fifty-four, of temperate habits and spare form, while walking at night, made some miscalculation on the dimensions of a trench washed by the rain, which he was passing; and instead of clearing it, as he intended, stepped very unexpectedly four feet downwards, to its bottom. The strain thus suddenly thrown upon the advanced leg caused an entire rupture of its tendo-achillis, about two inches above the insertion into the os calcis.

‘He came under my special notice as a patient at the Almshouse, in the surgical ward, about five weeks after the accident. At that time the calf of his leg was flattened; the extremities of the ruptured tendon, in the rectangular position of the foot, were an inch and a half apart, and could be moved easily from side to side; the depression between them was very obvious; and on flexing the foot there was no appearance of the tense cord, commonly made by the tendo-achillis when entire.

‘I know not to what extent or with what degree of exactness, the manner of treatment proposed by J. L. Petit, and since his day very generally adopted under various modifications of the apparatus, was resorted to previously to my seeing the patient. It is sufficient for my purpose to state, that the application of the principle of Petit was directed to be continued, without much expectation of its being useful, after so long an interval since the original accident. Another week thus elapsed. During this period, having had time to reflect on the very inconsiderable and remote advantage which I had obtained from similar curative measures the last summer, in a case where the patient had postponed applying to a surgeon for the first five or six weeks after a like accident, I determined to do something in this instance which I thought would both perfect and expedite the cure.

‘As in health tendons do not admit any sensible current of red blood into their vessels, but do so on being inflamed, we can easily understand how, if the first irritation from their rupture be permitted to pass without the fractured extremities being kept together, on the ordinary circulation of the part being subsequently re-established, it is insufficient for their restoration. The gap continues ever afterwards between the ruptured extremities, and is only imperfectly filled on the lapse of a long time, by a ligamentocellular substance, which forms a connecting link between the origin of the muscle and its insertion. The muscle itself is unable to produce its usual extent of motion, because it is left in a shortened state.

‘The indication, therefore, is to rouse again the circulation of the part by some permanent stimulus, so as to cause its vessels to secrete a matter suited to its restoration; and while this is going on, to keep the ruptured extremities as near together as can be done, so as to favour the uniting process. It is very well known that Dr. Physick, several years ago, (1802,) suggested, and happily executed, by the introduction of a seton, this manner of treatment on artificial joints from fractured bone: since then, the testimony of many surgeons in Europe and America, and his own additional experience, have established beyond doubt the value of his mode of cure. The case in question appeared to me a proper one for trying a similar plan on a ruptured tendon; accordingly, six weeks after the original accident in Lang, I passed a sharp, broad seton needle, armed with a piece of thin riband, an inch wide, between the broken extremities of the tendon. I became satisfied of the needle having entered the sheath of the tendon, by the escape of four or five drops

of synovial fluid. The pain of the operation was trifling, and the parts did not inflame much at first; but the inflammation having shewn itself in two or three days, continued to augment gradually for four weeks. About the latter period, the pain was severe, and sufficiently trying to the patient; he wished the removal of the seton, but I prevailed on him to bear it a little longer. At length, after it had been worn forty-five days, had produced suppuration, and seemed to be causing an ulceration for its own discharge, I withdrew it. In three or four days after the introduction of the seton, I had a bandage applied around the calf of the leg, and a thick pasteboard splint placed in front of the ankle-joint, so as to keep the foot permanently extended, and consequently the ends of the tendon as near as possible to one another. The patient was confined to his bed.

‘I have now (July 31, 1826) the happiness to state, that nearly five weeks have passed since the removal of the seton, the sore caused by it has healed, the gap between the ends of the tendon no longer exists; when the foot is flexed the tendon springs out like a stretched cord, and may be felt continuous from the heel to the gastrocnemius muscle, and it also imparts to the foot the contraction of the latter; in short, the cure seems to be accomplished. Fearful, however, of the strength of such newly-formed tendon, I have not permitted the patient as yet to try its firmness fully. As may be supposed, the gastrocnemius has not regained its strength, or original volume, a circumstance sufficiently common when muscles have from any cause been thrown out of action for a long time. Since I have announced the cure of Lang, the resident students of the house, who, by their intelligence and professional acumen are entirely competent to decide properly on a case of the kind, have also agreed with me that the tendon is reunited.

‘As my object is to communicate the fact of an unusual, but successful mode of treating a ruptured tendon, and not to write a paper, I have purposely omitted any discussion on the comparative value of the suture of Guy de Chauliac or Ambrose Paré, the bandage of Petit, the slipper of Monro, and the front splint on the leg, of Schneider. It however may be worthy of remark, that it is very possible to act correctly on wrong principles; that the suture of Paré, though not intended as an irritant or seton, acted as such, and thereby increased the inflammation of the ruptured tendon to a restorative point: whereas the fear of too much inflammation among modern surgeons, and the leeching, low diet, and purging which they enjoin, diminish the very action on which the speedy and perfect cure depends.’—(*Philadelphia Journal of the Medical and Physical Sciences*, for August 1826.)

SECTION III.—INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. Notice of a new Mode of Adulterating Sulphate of Quinine, and the Means of discovering such Adulteration. By M. A. CHEVALIER.

'THE salt in question had been offered at a lower price than that at which the genuine sulphate of quinine can be sold.

' Compared with genuine sulphate of quinine that had been carefully prepared, it was less white, its crystals shorter, and less acute; its odour resembled that of rancid fatty matter; its taste was less bitter, but more acrid, and producing an irritation that remained for some time in the throat. This last character, and the peculiar odour, induced a suspicion that the salt might be mixed with a fatty matter; to discover it, we made the following experiments:—

' We placed upon two pieces of "*papier Joseph*" two laminæ of sulphate of quinine,—the one genuine, the other taken from the suspected salt; and then placed them alternately at a height above the flame of a spirit lamp. The paper upon which the suspected salt had been heated appeared somewhat different from the other; but the difference was not very manifest. We tried, therefore, another experiment. We placed a gramme of each sulphate in separate silver spoons, and slowly heated them; and a very decided difference in the manner in which they were condensed was quickly evident. The suspected sulphate divided into two portions, the one fusible at a low temperature, the other infusible. The fusible portion gave the same appearance to paper that fatty matter does; the infusible was pure sulphate of quinine. The fatty matter was stearine.

' The direct mode of discovering this adulteration is by mixing the suspected salt with diluted sulphuric acid. This dissolves the sulphate of quinine, but not the stearine.'—(*Journal de Chimie Médicale*, Septembre 1826.)

II. *Sittings of the Royal Institute of France. Sept. 4, 1826.*

' *Natural History of Cantharides.*—M. Audouin read a memoir upon these insects, describing their internal and external organisation, and some curious particulars respecting their habits. The species are very numerous.

' The mandibles of the blistering cantharis are strong and both alike; seen in their natural position, they appear to terminate in a point, which is the profile of a sharp plate, (*d'une lame tranchante*); they have no teeth, but present at their base a flat circular tubercle, which rests upon a similar tubercle. The jaws are partly bony and partly membranous; many pieces are united in their formation; their interior is divided into two membranous, hairy lobes; their external edge supports a pulpa with four divisions; the first is very

short, the second and third are almost equal, the last is greater, more elongated, and oval. The lower lip presents also many pieces, which, instead of being distinct and manifestly articulated with each other, are united by a kind of common membrane, partly consistent and horny in some parts. M. Audouin could count only three divisions; the first very small, the second longer, the third short and truncated. The thorax presents no sensible difference from that of other coleopterous insects. The prothorax, or éorselet, is small, square, and less than the abdomen. The elytra are long and flexible, and cover the membranous transparent wings. The feet are smooth and slender, having filiform tarsi, furnished below with hairs, and terminated by a double pair of very long, curved horny hooks (*crochets cornets*). Five joints were counted in the tarsi of the anterior four feet, and four joints in the posterior pair. All the feet of the female cantharis had two small movable spine-like processes, at the union of the leg and tarsus. The male had the same processes in the two posterior pair; but the first pair were differently furnished. Instead of two spine-like processes placed upon the sides, there was only one, compressed, strong, with a cutting edge, and situated upon the median line.

‘The blistering cantharis has, according to the observations of M. Andouin, eight ganglia, independently of the brain, which consists of two lobes. The first is situated in the head, and appears to proceed from the union of two nervous chords, furnished by the brain from behind, and which, passing downwards, surround the œsophagus like a necklace; two longitudinal chords unite it to the posterior ganglion, which, as well as the two following, belong to the thorax. Much more developed than those of the abdomen, the thoracic ganglia afford many nerves on each side. The anatomy of the cantharis has demonstrated one fact, of which there is no other known instance. The two chords that unite the second thoracic ganglion to the third, cross each other about the middle of their course. That which rises on the right of the ganglion of the mesothorax is inserted in the left side of the ganglion of the mesothorax; and the same inversion is observed in the opposite chord. In this crossing the two chords remain free; thus making the phenomenon more sensible.

‘The circulatory system is common to all insects. The respiratory system is the same with the same system in other coleopterous insects.

‘The digestive system is very complicated. The intestinal canal begins at the base of the buccal apparatus by the pharinx, which soon contracts into a long, muscular, smooth, and cylindrical œsophagus. The stomach has its origin in the ‘metathorax,’ whence it penetrates into the abdomen, the greater part of which it occupies. Its inferior surface is in contact with the nervous chords, the muscles of the abdomen, &c.; it is very elongated, fusiform, and always more visible when it is full of nutriment. The termination of the stomach next the intestine has a remarkable structure: there exists at this point a true valve, formed by the union of several

small reniform bodies, free at their edges, and adhering only by the middle of their external surfaces to the stomach. Six were counted, and between each a biliary vessel was seen. The small intestine arose abruptly from the stomach; at first large, became gradually narrow, proceeded backwards, turned upon itself, forming an angle, was directed obliquely forwards, returned upon itself, forming a second angle, and then proceeded directly to the posterior part. This, which is more spacious, may be regarded perhaps as the cæcum; it ends in the rectum, which is narrower, and very short. The generative system does not materially differ from that of most other insects.—(*Revue Médicale*, Octobre 1826.)

III. *Biographical Notice of the late M. Laennec.*

THE narrow limits of celebrity, and the short space of time during which, in the present general struggle for distinction, any name can be particularly remembered, would, if much reflected upon, be almost sufficient to put a stop to half the industry of the world, by shewing that the prize which all consider the most valuable could not by any possibility be awarded to more than a very small number of those who aspire to gain it. To confine our observations to medical fame,—it would not be difficult to point out in this busy capital at least a hundred persons of the medical profession who consider the annunciation of their name as sufficient to procure an advantageous introduction and particular notice. We have but to cross a channel of twenty miles, and we come to a people esteeming themselves the most scientific, and the most civilised of all European nations, among whom the names of these distinguished persons were never yet pronounced. Even in Paris, hardly half-a-dozen of our eminent physicians or surgeons are known by name; and, by way of contrast, the most obscure and undignified surnames that were ever appended to a wonderful case in one of the journals are sometimes mentioned with an air of respect and reverence, by industrious foreigners, which is exceedingly distressing to men who wish to hear all the learned nothings of minute philosophers with becoming gravity. In England, however, we have our revenge; for, with the exception of those who have studied some time in Paris, most of us are acquainted but with very few of the eminent names in medicine and surgery of which that city boasts. Some, it is true, are known very familiarly; but there are several of considerable eminence, particularly in practice, whose names are almost wholly unknown in London.

Few names introduced to our notice from among the French have become so generally known in England in a short time as the name of M. Laennec. His invention of the stethoscope, great and useful as we believe it to be, would, there is much reason to suppose, have been passed by as one of those ingenious trifles which amuse for awhile and are forgotten; but the admirable pathological work in which this instrument was recommended, was of too high a character, contained too many important facts, was written with too great clearness and ability, not to be highly appreciated by the

most eminent professors and practitioners of England. It would be difficult to point out any single work in which so much accurate and intelligible knowledge is conveyed concerning the pathological anatomy of diseases of the most frequent occurrence, the highest interest, and we think we may add, the greatest obscurity. The pathology bore in many particulars so important a relation to practice, and both were presented as having so many interesting connexions with the new method of diagnosis, that we believe a knowledge of the instrument by which the latter was to be attained has been progressively, though slowly, extending itself from the capital to the larger towns, and from the schools of medicine into all the ramifications of country practice up to this time. The causes which have retarded the progress of a knowledge of the stethoscope have been on several occasions spoken of in this Journal. Our present task is to present a short account of its inventor, who lately closed a life which had been most ardently devoted to the labours of his profession, at the early age of forty-five. We derive the particulars from the *Nouvelle Bibliothèque Médicale*, to which M. Laennec was a frequent contributor.

Théophile René Hyacinthe Laennec was born at Quimper, in Lower Britany, in the year 1781; and his early years were passed with his uncle, a respectable physician at Nantes. He went to Paris in 1799, and first gained distinction among his fellow students by his familiar acquaintance with Greek and Roman literature,—a knowledge of which, in consequence of the distraction of a Revolution scarcely at that time concluded, had become, it would appear, very uncommon. Corvisart was at that time a lecturer; and it was under his guidance that the young Laennec became acquainted with the symptoms of diseases, and from his example that he acquired a decided taste for the study of pathological anatomy. In 1802 he obtained the first prizes of medicine and of surgery decreed by the French Institute; and was created Doctor in the following year. On the latter occasion he chose for the subject of his thesis *The Doctrine of Hippocrates relative to Practical Medicine*, evincing then, as he invariably did afterwards, his admiration of the works of that illustrious ancient.

Notwithstanding the labours of Morgagni, Portal, Bichat, and others, pathological anatomy does not appear to have been cultivated with much zeal before the time in which Laennec and Dupuytren attracted such great attention to it. Their rivalry, which was considerable, was beneficial to their pupils: each lectured on pathological anatomy, and both had numerous hearers and partisans. The health of Laennec, however, was not sufficiently robust to allow him long to continue this kind of contest; his practice also soon became considerable, and he gave up his lectures on morbid anatomy, although he by no means remitted his studies, but wrote many articles for the *Bibliothèque Médicale* and the *Journal de Médecine*, being also editor of the latter work for several years. In the numerous volumes of the *Dictionnaire des Sciences Médicales*, likewise, there are many contributions from his pen.

In 1816 he was appointed Chief Physician to the hospital *Necker*, to which he soon drew numerous pupils, both of his own and other countries. It was here that for three years he applied himself to the assiduous cultivation of the use and application of the stethoscope; and so diligent was he in this pursuit, that, when his work on *Mediate Auscultation* appeared in 1819, the author was obliged to withdraw from his too laborious pursuits, and by a visit to his native country (*Basse-Bretagne*) to endeavour, by means of rest, wholesome air, and relaxation of mind, to repair the serious injury done to his health. Such is too frequently the price at which a brilliant reputation is obtained. It would seem as if Providence were parsimonious of the fine gift of genius, and often associated it with a frame only calculated to last until time was given for its useful development, when the precious mind is hastily reclaimed by Him who allowed it for awhile to benefit the world.

After two years' absence from Paris, Laennec returned to the scene of his former industry, and was appointed Physician to the *Dutchess de Berri*. Soon afterwards, in consequence of the death of M. Hallé, whom, at his own recommendation, he had succeeded in that honourable appointment, he was called to succeed him also in the chair of medicine in the College of Paris, a situation which he filled with the highest degree of credit.

When, in consequence of the insubordination of the students, the Faculty of Medicine was dissolved by the French government, M. Laennec was joined to the commission charged with reforming and remodelling that body, being himself not appointed a professor during these changes, as he was intended to take the higher duty of a member of the *Conseil Royal de l'Instruction Publique*, an office also more lucrative than that of professor. Laennec, however, preferred being useful in his own more particular vocation, and solicited and obtained the chair of Clinical Medicine, in which, as in every previous situation, he was remarkable for the conscientious performance of his duty, and for his affability and kindness towards the numerous foreigners who resorted to him for instruction.

As an examiner, M. Laennec was by many of the candidates looked upon rather as a formidable person: some, however, justly considered it an honour to have passed an examination before him with success. At this time, it is to be remembered, the Parisian medical schools were filled with the disciples of M. Broussais, whose comprehensive doctrine of diseases too often afforded them an excuse for the absence of a very minute acquaintance with the science of pathology. Of Broussais, Laennec was the decided opponent, and the discussions between them are said by the friends of Laennec not always to have been conducted with moderation by his opponent,—a fact which, from what we have seen of the writings of M. Broussais, we find no difficulty in believing.

The English reader will soon, we believe, have an opportunity afforded, by a perusal of the *second* edition of the *Treatise on Mediate Auscultation*, to become acquainted with the practice of M. Laennec. In the notice before us, we find him spoken of

as having introduced into France the Italian method, or that of Rasori, of giving large doses of medicines usually administered with more caution, as, for instance, tartar-emetic. It is we think a question whether any thing has yet been proved by this practice, except the inertness of some medicines in large doses which are useful in smaller.

We have seen that M. Laennec had nearly paid the forfeit of his life for the publication of the first edition of his work: the severe care with which he revised it, in order to prepare a second edition, which is in reality almost a new work, seems actually to have hastened his death. The rapid advance of an illness, which perhaps he felt would be fatal, hastened his termination of this his latest and perhaps his most valuable production. He had been long subject to a dry cough, with transient pain in his side, and occasional attacks of diarrhœa. In April last, dyspnœa became troublesome, the cough was more frequent, the pain in his side was increased and accompanied with fever; and these symptoms admitted of very little relief from his being bled twice, and taking such medicines as were thought likely to be useful. Obstinate diarrhœa supervened; he became daily weaker and more emaciated, and in this state resolved once more to try what his native air of Britany could do for him. His journey was attended with several inconveniences, which added to his distress; but when he reached the end of it, the pleasure of being once more in a part of the country to which he was attached, his confidence in the efficacy of the sea air, the absence of all mental labour, together with frequent carriage exercise, seemed for a short time to revive him. But the diarrhœa and fever soon returned with increased violence, and this distinguished and excellent man closed his earthly career on the 13th of August, at Kerlouarnec, near Douarnenez, in the department of Finistère.

His biographer and friend, M. Kergaradec, thus sums up his character:—

‘He whose public and medical life I have attempted to sketch, was a man of manners so mild and of so equal a temper, as to render his society agreeable and his friendship desirable. His conversation was lively and animated, and at the same time highly instructive and interesting. Nor had any thing been taken away from these valuable qualities by the acquisition of honours. Though naturally of a kind and obliging disposition, he never employed his credit for those whom he did not believe to be worthy of his esteem and friendship. When he had conferred a favour, his mind was too noble and elevated, and his character too generous, for him to require those assiduous attentions with which patrons are so often gratified. No one could desire less homage than he did; and the consequence of this was, that, instead of being surrounded by flatterers, he was environed by good and true friends, who justly appreciated his merit and virtue.

‘In his political and religious opinions he was firm and undeviating, even in times when a belief in the truths of the gospel, and

an observance of the precepts of religion, were not titles to favour, but causes of obloquy (*étaient des titres de défaveur*): but towards others he was tolerant; and whatever were the opinions, or whatever was the belief of those who presented themselves to him, he was equally affable and obliging to all.'

We cannot conclude this notice of a good and highly distinguished man, without remarking that we have observed with disgust, though not with surprise, that the part of the medical press, the efforts of which to demoralise the profession, and particularly the younger members of it, we have already denounced, have dared to insult the memory of LAENNEC, by calling him a fanatic. We shall at present make no further comment upon this unjustifiable misrepresentation. From the character of M. Laennec it can take nothing; but it shews the spirit by which certain persons in the profession are animated, and how unable they are to bear the spectacle of a man enjoying any eminence by the exercise of talent in this world, and yet *not* forgetful that there is another. We are glad, however, to see that these persons so wholly mistake the present state of medical feeling, for by this means their malice becomes deprived of half its poisonous power. When the distinguishing colours of the standard are displayed, we are enabled to see the smallness and meanness of the party which rallies round it.

IV. Membranous Angina.

'An epidemic malady, to which this name has been given by the practitioners of the district in which it has prevailed, and which is precisely the diphtheritis of M. Bretonneau, has proved most fatal in the canton of Magnac-Laval (Haute-Vienne). In this commune there are generally about thirty-five deaths in a year: but in the year including the period of the epidemic, the deaths amounted to more than triple that number. The victims of the disorder were for the most part children; and the greatest mortality was observed where the habitations were in low situations, and exposed to cold winds. On the second day of the disease a false membrane was formed in the fauces: when the pharynx only was affected, the disease was often cured; but when the larynx, trachea, and bronchi, were affected, the patients, almost without exception, died with symptoms of croup and suffocation. The means employed in the treatment of this malady were, general bleeding, leeches to the neck, gargles with the addition of honey and muriatic acid, emetics, laxatives, cutaneous derivatives, sinapisms, and blisters. The disease is considered by M. Mazard, who gives an account of it in a report to the Academy, to be epidemic, but not contagious; but at the same time he advises the separation of the sick, because the disorder may be contracted by inhaling their breath. This destructive disease was still prevailing in April last, at which time, although a similar disorder had been noticed at Tours at different times, for at least eight years, and three memoirs had been read to the Academy

concerning it by M. Bretonneau, the practitioners of Magnac-Laval appear to have been in complete ignorance on the subject, and never to have heard of the remarkable effects of calomel in the disorder.'—(*Revue Méd.*, Août.)

V. *Medical Jurisprudence.*

THE extraordinary pains taken by the editors of the English newspapers to collect all the particulars of every horrid murder and every disgusting outrage, are, we very much fear, productive not only of the worst general effects upon the public mind, and of a diminution of humane and proper feelings,—but also in some instances, by their results being fully and even repeatedly presented to persons of weak intellect, or who are disposed to insanity, of an actual increase of these dreadful enormities. The avidity with which materials for these horrible recitals are collected, in whatever part of the country the crimes may have been committed; the long and laboured narratives composed on these occasions; the repetitions, the drawings with which the stories are accompanied, and all the tricks by which the most cold-blooded and cowardly assassins are sometimes held up, for weeks together, as a kind of heroes to be admired, are subversive of every just sentiment on these topics, most disgraceful to the public press, and most hurtful to public morals.

The influence of a medical journal is, of course, much too limited to allow any hope that our observations should be attended to in the proper quarter; but we have been led to notice this subject because we see that the evil is not confined to England, and that M. Esquirol intends drawing the attention of the French government to it; and also because, among those before whom these remarks will come, we know there are some individuals whose opinion on the subject, properly expressed, and in the proper place, would not fail to be attended to.

At a meeting of the Section of Medicine of the French Academy, in August, the following circumstances were stated:—M. Barbier, of Amiens, reported, that a woman of the age of twenty-four, whose mind had been strongly affected with the recital of a murder committed by a girl named Cornier on an infant, was inspired with the idea of doing the same thing, and soon afterwards was inclined, by an almost irresistible inclination, to destroy her own child. She had, happily, strength enough to resist this horrible propensity, and several circumstances happened to prevent the accomplishment of the crime she meditated: but she is not yet free from this terrible *monomania*; and from time to time the desire to murder her child springs up again in her mind in spite of herself. Messieurs Marc, Bricheteau, and Esquirol, mentioned analogous instances, arising out of the recital of the same murder of the woman Cornier. M. Bricheteau related the case of a young lady, who, having been to Vincennes, and having often seen the spot where Papavoine assassinated the two children, was so affected by it, that she con-

ceived the desire to destroy her own infant, and also her mother. M. Esquirol said, that he had been consulted about a month before by a gentleman, forty years of age, who, since the publication of the accounts of the crimes not long before committed, had conceived the wish, in spite of himself, to kill his wife. Similar cases were mentioned by M. Villermé, M. Bailly, and other members; and it was on this occasion that M. Esquirol announced his intention of laying some cases of this kind before the proper authorities.

VI. Appointment of Chaplain to Lancashire Lunatic Asylum.

OUR own opportunities of observing lunatics have not been sufficiently extensive to justify us in giving any very decided opinion respecting the influence of religious instruction on insanity. Nor are we aware that it has been had recourse to in any other asylum than that from which the following report has proceeded. Conceiving, however, that those individuals to whom it would be beneficial must be capable of attending the usual service of the church, and that no clergyman of character would refuse his attendance when called upon to individual cases in the asylum, we can scarcely conceive any circumstances that could demand the appointment of a chaplain. That the chances against his conversing properly with lunatics are very great, all medical men will readily recognise, who are sensible how much even in general disease depends upon the mental management of their patients, and how frequently a careless observation lowers the vital powers. We give the following report without any particular remark; but we shall be glad to hear from any one much conversant with lunatics what may have been the result of their own experience.

'The Opinion of the Medical Officers of the Lancashire Lunatic Asylum, on the Application of Religious Worship to the Patients in this Establishment, having been misrepresented in some of the Public Prints, it has been deemed proper to furnish the Magistrates with a corrected copy of their Report on the subject; which has been deduced from Observations on more than five hundred individual cases.'

' TO THE VISITING JUSTICES OF THE LANCASHIRE LUNATIC ASYLUM.

GENTLEMEN,—In communicating our observations on the performance of religious duties in this Asylum, we feel great satisfaction in bearing our willing and unequivocal testimony to the zealous and indefatigable exertions of the highly respectable clergyman in attendance. But as the engaging persons who are in a state of insanity, in the performance of these duties, was originally meant to be an experiment, and nearly three years having now elapsed since it has been carried into effect, we find it is expected that the medical officers should be prepared to form an opinion of its results, as they respect the alleviation or aggravation of the disorder; to which points we wish it may be understood that our observations are alone

directed; and if, in the course of this experiment, our opinions may have vacillated, as conflicting testimonies appeared to preponderate, we trust that this temporary hesitation will not deduct from the sincerity or accuracy of our ultimate conclusions.

‘(And here we think it proper to premise, in case an opinion should be entertained that insanity can be removed by the influence of precept, or a process of reasoning, as it applies to religion, or any other subject, that nothing can be more opposed to hitherto acknowledged experience. A person in his senses may entertain and believe unfounded and erroneous opinions; but on exposure of their falsity, he is capable of being corrected and convinced,—whilst the insane person never is; and this forms the great distinction betwixt them. In fact, the alleviation and cure of insanity has always been the province of the medical practitioner, and not of the logician or divine.)

‘We shall now go on to observe, that the application of religious exercises to a collective body of insane persons cannot proceed upon the same general principles as with those who are in the possession of sound minds; because, whilst many of them are incapable of deriving the least benefit, there are others whose disorder may be aggravated; consequently, that a selection of such as may be susceptible of advantage, from those to whom it would be useless or prejudicial, will be proper and necessary; and of making this selection, the medical attendants can be, alone, the adequate judges.

‘On looking carefully over the individual cases of our patients, it appears they may be arranged under the following classes:—

‘1. Such as are in a state of constant maniacal excitement; or with such a deficiency of understanding as to constitute fatuity or idiocy.

‘2. Such as have disordered ideas generally, or on particular subjects only (of which religion is not unfrequently one), with those temporary alleviations which are usually termed lucid intervals.

‘It must be obvious, that those in the first class are utterly incapable of deriving any benefit from religious instructions or communications.

‘In the second class, there are persons who, in that mitigated state of their disorder, a lucid interval, may join in devotional exercises from spontaneous inclination and a sense of duty, or who may be induced by the influence of precept and example; and it is only on these, and on convalescents, that, in our opinion, religious exercises can be employed with any reasonable prospect of utility; but especially on convalescents, because we have frequently observed that a proper sense and understanding of religious duties is one proof of a restoration of the reasoning faculties, and is generally a precursor of their discharge.

‘In this number are included Roman Catholics, and those whose aberrations are principally on religious subjects, and the propriety of permitting or enforcing the attendance of persons of these descriptions cannot but be accompanied with doubt and delicacy.

‘ In this class there will be also constantly a considerable number of sick persons and of invalids, who, from the nature of their complaints, are rendered incapable of attendance in a place of general worship.

‘ But in tracing the effects of devotional exercises on these persons, the difference betwixt minds gifted with reason, and such as only enjoy partial and temporary gleams of that light, may too frequently be perceived. It is true, as we have observed, that some of them shew a spontaneous inclination to join in religious worship; and others, who may be induced to participate, conduct themselves in an orderly and regular manner during the time of service. It cannot, however, be concealed, that some (as might be expected in a congregation of this description) exhibit marks of irritation and impatience, especially amongst the females, so as to render it necessary to remove them; but this mostly towards the conclusion of the service. Their incapacity, too, of distinguishing literal from figurative and allegorical meanings of what they hear and read, has sometimes been productive of increased confusion of their ideas. The patients in this Asylum are, for the most part, from the working classes of society, who have had few opportunities of early instruction; and hence their views of religion, as well as other subjects, are more limited and inaccurate than with persons who have had the advantage of a more liberal education. And it will, we think, be allowed us to draw this inference, that such unfortunate persons are incapable of following the threads of a discourse which consists of conclusions from a train of deductive reasonings; which, as they are *incompetent to comprehend, cannot fail to DISTURB minds already unhinged by disease.*

‘ Should our opinion be now asked as to the form or extent that devotional exercises may be performed with the most reasonable prospect of advantage to the patients, as it relates to the tranquillising their minds, or benefiting their moral habits, and thereby promoting their restoration to reason, where this is practicable, we would, with the greatest deference, suggest—

‘ 1. That the present *selection*, by the medical officers, of the persons who are proper to attend religious worship in the chapel, and also of those who may be thought capable of being benefited by the perusal of books on religious subjects, appears indispensably necessary to be continued.

‘ 2. That the part of the devotional exercises in the chapel which consists of a sermon or discourse, should be in the plainest language, free from every thing of an argumentative or doctrinal cast; and that the general tendency be to inspire hope and alleviate despondency, as persons who are liable to considerable excitement are seldom in a fit state to attend public worship; and we are also of opinion that these services should not be extended to very considerable length.

‘ Under these restrictions and regulations, we think that even to those who are in the darkness of delusion, the temporary gleam afforded by religious consolations may be a source of comfort to which they would otherwise be total strangers; whilst those who

may be susceptible of a more perfect interval of insanity, will experience those advantages in a degree proportioned to the increased capability of their understandings. On convalescents it may be the means of preparing them for a return to their usual religious duties; on those who have not yet attained that degree of restoration of their faculties, it may prove a powerful auxiliary to the moral restraints so necessary and efficacious in moderating and counteracting irrational propensities; and in an extensive establishment like this, the regular performance of religious duties cannot fail of contributing to that order and decorum in society, on which its prosperity and utility so essentially depend.'

D. CAMPBELL, M.D. Physician, and

Fellow of the Royal College of Physicians, Edinburgh.

W. DAVIDSON, Surgeon and Superintendent.

Lancashire Lunatic Asylum, Sept. 1826.

VII. *Stammering.*

DR. JAMES JOHNSON presents his compliments to the Editors of the LONDON MEDICAL REPOSITORY, and considers it a duty to state, that a very severe impediment of speech, of more than ten years' duration, was removed, in the case of one of his sons, by Dr. Hart. The process was conducted before Dr. Johnson's eyes, and is based on strictly physiological principles. This information may be gratifying to those who are afflicted, or who have friends afflicted with such a distressing defect.

Suffolk Place, Haymarket, Nov. 20, 1826.

VIII. *List of New Officers of the College of Physicians.*

THE following names have been added during the past year to the list of Fellows and Licentiates of the College of Physicians:—

Fellows.—Dr. Thomas Watson, Henrietta-street, Cavendish-square; Dr. George Leith Roupell, Great Ormond-street; Dr. Richard Prichard Smith, Reading; and Dr. John Spurgin, Guildford-street.

Licentiates.—Dr. William Speir, Bartlett's Buildings; Dr. Samuel Millar; Dr. Thomas Hodgkin, New Broad-street; Dr. Richard Davie, Leamington; Dr. P. Frederick de Jersey; Dr. Aeneas M'Andrew, Great Surry-street, Blackfriars; Dr. Charles Lush, Leadenhall-street; Dr. Francis Boott, Gower-street; Dr. John Wilton, Upminster; Dr. John Forbes, Chichester; Dr. George G. Sigmond, Dover-street; Dr. Charles Phillips, Union-street, Southwark; Dr. George B. Waddell, Charlotte-street, Blackfriars; Dr. Whitlock Nicholl, Old Burlington-street; Dr. James Clark; Dr. James Scott, Haslar Hospital; and Dr. C. Agar Hunt, Richmond.

The Commissioners appointed under the 'Act for Regulating Mad-houses.'—Sir H. Halford, bart., Dr. Thompson, Dr. Yeats, Dr. Young, Dr. Macnichael, the Secretary, Dr. Bright, Curators of the Museum, the President, the Censors, Dr. Ager, Sir G. Tuthill, Dr. Paris, and Dr. Hawkins.

Censors for the present year.—Dr. Lambe, Dr. Cope, Dr. Southey, Dr. Hewett.

Clinical Report of the most prevalent Diseases during the preceding Month.

THE weather has varied considerably during this month, and cold frosts have alternated with close and even warm weather. More rain has fallen in November than for several months before.

Fever has continued a predominant disease, and the cases have been more severe. Frequently originating with the symptoms of common catarrh, they have run a long course, and many cases have ended fatally. The disorder of the bowels has been the most constant symptom, but in one fatal case the lungs were first attacked. This patient became typhoid, and died rather suddenly.

Pulmonary disorders have greatly increased during November. Many fatal cases of pneumonia in children have been made known to us; and old asthmatic patients have very commonly experienced an aggravation of their complaints. Rheumatism has appeared to be more common, but we have met with no very severe instances. Upon the whole, we consider November to have been the most unhealthy month since May last.

The case of diabetes mentioned in our two last reports is still under treatment, but with very little chance of recovery. The skin had remained moist and smooth till the last week, and she had easily perspired. Seven days ago, it became rather dry, and appeared to be assuming that peculiar dry state which is so well known as common to diabetic patients. The appetite in the meanwhile was much increased, and the urine had become abundant. At this time she was ordered a warm bath, which was followed by profuse perspiration. The urine has diminished from eleven to nine pints in the twenty-four hours, and the skin is become more natural in appearance and feeling.

We have at this time also a case of what we believe to be aneurysm of the aorta, just before the origin of the arteria innominata. The man was formerly a police officer and boxer, and is fifty years of age. There is an external tumour between the third and fourth ribs, on the left of the sternum, which has considerably increased in size since we first saw the patient, a month ago. It pulsates strongly, and is painful on pressure. The patient applied to us on account of a pain in the shoulder, not being in the least aware of the aneurismal swelling. The symptoms are those commonly comprehended under the name of angina pectoris. The pulse on the left side is distinct, and was powerful, but is diminished in strength within the last week. It can be felt on this side in the carotid, subclavian, and brachial arteries. On the right side there is scarcely a pulse to be felt. We are watching the case, and hope to be able to examine it.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. Philadelphia Journal of the Medical and Physical Sciences, No. VI.
2. A Small Tract, consisting of Practical Observations on the following subjects:—1. On the Present State of Medicine. 2. On the Causes which impede the Progress of Medicine. 3. On Pulmonary Consumption. 4. On the Treatment of Wounds and Ulcers, and Hæmorrhage. 5. Observations

on Fractures, Dislocations, &c. 6. On the London Pharmacopœia. By Richard Walker, Surgeon-Apothecary, Oxford. 1826.

3. Manual of Pathology; containing the Symptoms, Diagnosis, and Morbid Characters of Diseases: together with an Exposition of the different Methods of Examination, applicable to Affections of the Head, Chest, and Abdomen. By L. Martinet, D.M.P. Translated, with Notes and Additions, by Jones Quain, A.B. London, 1826.

4. Instructions for Collecting, Preserving, and Transporting such Specimens of Natural History as appertain to the Animal Kingdom. Principally translated from the French, by John Chichester, M.D.

5. A Treatise on Repelling the Paroxysm of Intermittent Fevers; illustrated with Cases. By John Brown, M.D., Fellow of the Linnean Society, &c. &c.

6. Mémoires ou Recherches Anatomico-Pathologiques sur la Ramollissement avec Amincissement, et sur la Destruction de la Membrane Muqueuse de l'Estomac. L'Hypertrophie de la Membrane Musculaire de l'Estomac, dans le Cancer du Pyloré. La Perforation de l'Intestin Grêle. Le Croup, chez l'Adulte, &c. &c. Par P. Ch. A. Louis, Docteur en Médecine des Facultés de Paris et de Saint Petersburg, &c. Paris, 1826. Pp. 563.

Quarterly Report of Prices of SUBSTANCES employed in PHARMACY.

| | s. | d. | | s. | d. |
|---|----|----|--------------------------------------|----|----|
| Acaciæ Gummi elect. ....lb. | 3 | 4 | Coccus (Coccinella) .....unc. | 2 | 3 |
| Acidum Citricum .....lb. | 20 | 3 | Colocynthis Pulpa Turk. ....lb. | 6 | 6 |
| Benzoinum .....unc. | 3 | 0 | Copaiba .....lb. | 5 | 0 |
| Sulphuricum .....P. lb. | 0 | 6 | Colchici Radix (sic.) .....lb. | 2 | 6 |
| Muriaticum .....lb. | 0 | 9 | Croci stigmata .....unc. | 2 | 4 |
| Nitricum .....lb. | 2 | 6 | Cupri sulphas .....lb. | 1 | 0 |
| Aceticum Dilut. ....cong. | 4 | 6 | Cuprum ammoniatum .....lb. | 8 | 3 |
| Tartaricum .....lb. | 4 | 6 | Cuspariæ Cortex .....lb. | 3 | 3 |
| Alcohol .....M. lb. | 3 | 6 | Confectio aromatica .....lb. | 5 | 2 |
| Æther sulphuricus .....lb. | 7 | 0 | Aurantiorum .....lb. | 2 | 6 |
| rectificatus .....lb. | 9 | 0 | Cassia .....lb. | 6 | 3 |
| Aloes spicatæ extractum .....lb. | 7 | 6 | Opii .....lb. | 6 | 2 |
| vulgaris extractum .....lb. | 8 | 0 | Piperis Nigri .....lb. | 3 | 6 |
| Althææ Radix .....lb. | 1 | 2 | Rosæ canina .....lb. | 1 | 8 |
| Alumen .....lb. | 0 | 6 | Rosæ gallica .....lb. | 2 | 2 |
| Ammonia Murias .....lb. | 1 | 8 | Rutæ .....unc. | 3 | 6 |
| Subcarbonas .....lb. | 2 | 0 | Scammonia .....unc. | 2 | 6 |
| Amygdalæ dulces .....lb. | 3 | 6 | Sennæ .....lb. | 3 | 3 |
| Ammoniacum (Gutt.) .....lb. | 7 | 0 | Emplastrum Ammon. c. Hydrar. ....lb. | 6 | 6 |
| (Lump.) .....lb. | 3 | 6 | Cantharidis .....lb. | 6 | 0 |
| Anthemidis Flores .....lb. | 3 | 0 | Hydargyri .....lb. | 3 | 2 |
| Antimonii oxydum Ver. ....lb. | 6 | 3 | Opii .....lb. | 3 | 6 |
| sulphuretum præp. ....lb. | 3 | 6 | Resinæ .....lb. | 1 | 8 |
| sulphuretum præp. ....unc. | 0 | 6 | Saponis .....lb. | 1 | 8 |
| Antimonium Tartarizatum .....lb. | 3 | 4 | Extractum Aconiti .....unc. | 3 | 12 |
| Arsenicum Alb. Sublim. ....lb. | 2 | 6 | Anthemidis .....lb. | 8 | 0 |
| Assafœtidæ Gummi-resina .....lb. | 4 | 0 | Belladonnæ .....unc. | 1 | 6 |
| Aurantii Cortex .....2 0 | 2 | 4 | Cinchonæ .....lb. | 3 | 3 |
| Argentii Nitras .....unc. | 5 | 9 | Cinchonæ resinosum .....lb. | 4 | 6 |
| Balsamum Peruvianum .....lb. | 15 | 3 | Colocynthis .....lb. | 4 | 6 |
| Tolutanum .....lb. | 30 | 0 | Colocynthis comp. ....lb. | 1 | 9 |
| Benzoinum elect. ....lb. | 8 | 6 | Conil .....lb. | 5 | 0 |
| Bismuthi Subnitras .....unc. | 1 | 0 | Elaeterii .....lb. | 35 | 3 |
| Calamina præparata .....lb. | 0 | 6 | Gentianæ .....lb. | 3 | 4 |
| Calci Murias .....unc. | 0 | 3 | Glycyrrhizæ .....lb. | 7 | 3 |
| Muriatis solutio .....lb. | 1 | 3 | Hamatoxyli .....unc. | 3 | 5 |
| Calumbæ .....lb. | 5 | 6 | Humuli .....lb. | 1 | 6 |
| Cambogia .....lb. | 7 | 6 | Hyoscyami .....lb. | 1 | 3 |
| Camphora .....lb. | 4 | 2 | Jalapæ .....ls. 6d. Res. | 3 | 3 |
| Canelle Cortex elect. ....unc. | 2 | 6 | Lactucæ Sativæ .....unc. | 1 | 3 |
| Cantharis .....lb. | 12 | 3 | Virose .....unc. | 1 | 3 |
| Cardamomi Semina .....lb. | 10 | 0 | Opii .....lb. | 4 | 6 |
| Cascarillæ Cortex elect. ....lb. | 1 | 6 | Papaveris .....lb. | 3 | 9 |
| Castoreum .....unc. | 3 | 3 | Rhei .....lb. | 2 | 3 |
| Castor Russ .....oz. | 15 | 3 | Sarsaparillæ .....lb. | 2 | 3 |
| Catechu Extractum .....lb. | 1 | 9 | Stramonii Sem. ....unc. | 5 | 3 |
| Cetaceum .....lb. | 3 | 0 | Taraxaci .....lb. | 3 | 6 |
| Cera alba .....lb. | 3 | 4 | Ferri subcarbonas præcip. ....lb. | 3 | 4 |
| flava .....lb. | 3 | 3 | sulphas .....lb. | 1 | 0 |
| Cinchonæ cordifoliæ Cortex (yellow) ..lb. | 10 | 6 | Ferrum ammoniatum .....lb. | 3 | 3 |
| lancifoliæ Cortex (quilled) .....lb. | 4 | 0 | tartarizatum .....lb. | 3 | 9 |
| oblongifoliæ Cortex (red) .....lb. | 9 | 0 | Galbani Gummi-resina .....lb. | 7 | 6 |
| Cinnamomi Cortex .....lb. | 14 | 3 | Gentianæ Radix elect. ....lb. | 1 | 3 |

| | s. | d. |
|---------------------------------|-------------|------|
| Guaiaci resina | 7 | 6 |
| Hydrargyrum purificatum | 4 | 3 |
| præcipitatum album | 8 | 3 |
| cum creta | 3 | 3 |
| Hydrargyri Oxymurias | unc. | 0 9 |
| Submurias | P. lb. | 6 6 |
| Nitrico-Oxydum | | 0 6 |
| Oxydum Cinereum | | 1 8 |
| Oxydum rubrum | | 4 0 |
| Sulphuretum nigrum | | 0 6 |
| rubrum | | 0 4 |
| Hellebori nigri Radix | lb. | 2 6 |
| Ipecacuanhæ Radix | | 16 6 |
| Pulvis | | 19 3 |
| Jalapæ Radix | | 6 3 |
| Pulvis | | 7 3 |
| Kino | | 7 3 |
| Liquor Plumbi subacetatis | P. lb. | 0 8 |
| Ammonie | 1 0-2 6 | 5 9 |
| Arsenicalis | | 1 3 |
| Potassæ | | 1 0 |
| Linimentum Eruginis | lb. | 3 0 |
| Camphoræ comp. | | 5 6 |
| Saponis comp. | | 4 3 |
| Lichen | | 2 6 |
| Magnesia | | 7 3 |
| Magnesie Subcarbonas | 2 6 | 3 3 |
| Sulphas | | 0 4 |
| Manna | | 16 0 |
| communis | | 6 3 |
| Moschus pod. (32s.) | in gr. unc. | 46 3 |
| Mastiche | lb. | 8 3 |
| Myristicæ Nuclei | | 14 6 |
| Myrrha | | 7 3 |
| Olibanum | | 3 3 |
| Opopanaxis gummi resina | | 20 3 |
| Opium (Turkey) | | 32 3 |
| Oleum Æthereum | oz. | 2 3 |
| Amygdalarum | lb. | 3 6 |
| Anisi | unc. | 1 8 |
| Anthemidis | | 6 3 |
| Cassie | | 5 3 |
| Caryophylli | | 4 6 |
| Cajuputi | | 3 0 |
| Carui | | 1 6 |
| Juniperi Ang. | | 6 3 |
| Lavandulæ | | 2 6 |
| Lini | cong. | 4 3 |
| Menthæ piperitæ | unc. | 3 0 |
| Menthæ viridis Ang. | | 4 6 |
| Origani | unc. | 1 3 |
| Pimentæ | unc. | 5 6 |
| Pulegii | unc. | 4 6 |
| Ricini optim. | | 3 6 |
| Rosmarini | unc. | 3 9 |
| Succini | | 3 6 |
| Sulphuratum | P. lb. | 1 2 |
| Terebinthinæ | | 1 4 |
| rectificatum | | 2 3 |
| Olivæ Oleum | P. lb. | 9 0 |
| secundum | | 1 6 |
| Papaveris Capsulæ | (per 100) | 2 9 |
| Pix Abietina | lb. | 1 3 |
| Plumbi Acetas | | 1 6 |
| Subcarbonas | lb. | 3 8 |
| Oxydum semi-vitreum | | 3 8 |
| Potassa Fusa | unc. | 3 6 |
| cum Calce | | 3 2 |
| Potassæ Nitras | 0 6 | 1 3 |
| Acetas | | 7 3 |
| Carbonas | | 2 6 |

| | s. | d. |
|------------------------------------|--------|------|
| Potassæ Subcarbonas | | 1 4 |
| Sulphas | | 1 6 |
| Sulphuretum | | 3 9 |
| Supersulphas | | 2 4 |
| Tartaras | | 2 4 |
| Supertartaras | | 1 3 |
| Pilule Hydrargyri | unc. | 0 4 |
| Pulvis Antimonialis | | 0 4 |
| Cinnamomi compos. | unc. | 1 6 |
| Contrayervæ comp. | | 0 4 |
| Ipecacuanhæ compos. | unc. | 0 9 |
| Scammonie compos. | unc. | 3 8 |
| Tragacanthæ comp. | | 0 8 |
| Resina Flava | lb. | 0 6 |
| Rhæi Radix (Russia) | | 28 4 |
| (East India) opt. | | 13 6 |
| Rosæ petala | | 10 9 |
| Sapo (Spanish) | | 2 6 |
| Sarsaparillæ Radix (Jam.) | | 6 3 |
| Scammonie Gummi-Resina | unc. | 4 0 |
| Scillæ Radix siccata | lb. | 1 6 |
| Senegæ Radix | | 3 6 |
| Sennæ Folia | 5 0 | 6 6 |
| Serpentariæ Radix | | 4 9 |
| Simaroubæ Cortex | | 3 6 |
| Sodæ subboras | | 2 6 |
| Sulphas | | 0 3 |
| Carbonas | | 3 9 |
| Subcarbonas | | 1 0 |
| exsiccata | | 3 3 |
| Soda tartarizata | | 2 3 |
| Spongia usta | unc. | 1 6 |
| Spiritus Ammoniac | M. lb. | 4 6 |
| aromaticus | | 4 6 |
| foetidus | | 4 3 |
| succinatus | | 4 3 |
| Cinnamomi | | 3 6 |
| Colchici Ammon. | unc. | 0 9 |
| Lavandulæ | lb. | 5 3 |
| Myristicæ | | 3 3 |
| Pimentæ | | 3 3 |
| Rosmarini | | 4 3 |
| Ætheris Aromaticus | | 9 3 |
| Nitrici | 3 6 | 5 3 |
| Sulphurici | | 6 3 |
| Compositus | | 6 3 |
| Vini rectificatus | | 26 0 |
| Syrupus Papaveris | lb. | 1 3 |
| Sarsaparillæ | lb. | 9 3 |
| Tolutanus | lb. | 2 9 |
| Sulphur Sublimatum | | 0 6 |
| Lotum | | 1 6 |
| Præcipitatum | | 1 5 |
| Tamarindi Pulpa opt. | | 2 6 |
| Terebinthina Vulgaris | | 0 16 |
| Canadensis | | 6 6 |
| Chia | | 10 3 |
| Tinct. Ferri muriatis | | 4 3 |
| Tragacantha Gummi | | 8 3 |
| Valerianæ Radix | | 1 3 |
| Veratri Radix | | 1 13 |
| Vinum Colchici | | 4 3 |
| Ipecacuanhæ | | 4 0 |
| Opil | | 8 0 |
| Unguentum Hydrargyri fortius | | 3 0 |
| Nitratæ | | 5 8 |
| Nitrico-oxydi | | 4 3 |
| Uvæ Ursi Folia | | 3 4 |
| Zinci Oxydum | | 5 3 |
| Sulphas purif. | | 1 3 |
| Zingiberis Radix opt. | | 4 3 |

NEW REMEDIES.

| | s. | d. |
|-------------------------|-------------|------|
| Brucine | dr. | 28 3 |
| Emetine du Codex | dr. | 25 3 |
| Hydriod. Potassæ | oz. 5s. dr. | 1 0 |
| Iodine | oz. 5s. dr. | 1 0 |
| Tincture | oz. | 0 10 |
| Morphine Crystall. | dr. | 21 3 |
| Acetate | dr. | 20 3 |

| | s. | d. |
|--|-------------|------|
| Morphine Acetate Liquor ..oz. 18s. dr. | | 2 3 |
| Hydrocyan. Acid (Scheele's), twice the strength of Vauquelin's oz. 3s. 8d. dr. | | 0 6 |
| Quinine Sulphate | oz. 30. dr. | 4 6 |
| Strychnine | dr. | 26 3 |
| Veratrine | dr. | 30 3 |

Furnished by Messrs. J. and G. WATSON, Chemists and Druggists, Regent Street.

THE METEOROLOGICAL JOURNAL,

From the 20th of OCTOBER, 1826, to the 19th of NOVEMBER, 1826.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50 High Holborn.

| October | Moon. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|---------|-------|-------------|---------|------|------|---------|----------|------------------|----------|---------|----------|------------------|---------|----------|
| | | | 9 A. M. | Max. | Min. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 10 P. M. | 9 A. M. | 9 P. M. | 10 P. M. |
| 20 | | | 60 | 62 | 58 | 29 | 85 | 29 | 85 | 96 | 95 | E | E | Clo. |
| 21 | | | 59 | 69 | 58 | 29 | 85 | 29 | 88 | 96 | 89 | ESE | SSE | |
| 22 | | 27, | 61 | 63 | 58 | 29 | 82 | 29 | 79 | 92 | 93 | S | SE | Rain |
| 23 | | 40, | 60 | 63 | 55 | 29 | 78 | 29 | 82 | 95 | 95 | SE | SW | Rain |
| 24 | | | 56 | 63 | 55 | 29 | 83 | 29 | 61 | 93 | 92 | WSW | SSW | Starl. |
| 25 | ☾ | 18, | 58 | 58 | 45 | 29 | 35 | 29 | 35 | 87 | 82 | SW | W | Fair |
| 26 | | | 46 | 52 | 43 | 29 | 34 | 29 | 48 | 84 | 80 | WNW | WNW | Fine |
| 27 | | 23, | 47 | 53 | 40 | 29 | 54 | 29 | 70 | 84 | 78 | WSW | NW | Fair |
| 28 | | | 44 | 54 | 44 | 29 | 97 | 30 | 03 | 81 | 78 | WNW | W | Fog. |
| 29 | | | 48 | 54 | 50 | 30 | 02 | 29 | 93 | 84 | 93 | WSW | W | Clo. |
| 30 | | 4, | 50 | 56 | 47 | 29 | 99 | 29 | 94 | 95 | 95 | NE | WSW | Rain |
| 31 | ● | | 50 | 52 | 43 | 29 | 97 | 29 | 91 | 78 | 83 | NW | W | Clo. |
| 1 | | | 44 | 50 | 40 | 29 | 64 | 29 | 53 | 85 | 79 | SW | NNW | Fog. |
| 2 | | | 42 | 50 | 42 | 29 | 67 | 29 | 76 | 83 | 87 | N | N | Fine |
| 3 | | | 46 | 53 | 47 | 29 | 78 | 29 | 66 | 90 | 96 | N | NE | Fine |
| 4 | | 103, | 48 | 48 | 42 | 29 | 64 | 29 | 77 | 98 | 97 | ENE | ENE | Rain |
| 5 | | | 46 | 50 | 44 | 29 | 75 | 29 | 69 | 97 | 94 | ENE | NNW | Clo. |
| 6 | ☾ | 28, | 45 | 48 | 31 | 29 | 66 | 29 | 73 | 95 | 84 | WNW | N | Clo. |
| 7 | | | 32 | 42 | 33 | 29 | 81 | 29 | 92 | 78 | 78 | N | WNW | Fog. |
| 8 | | | 37 | 41 | 33 | 29 | 97 | 30 | 00 | 78 | 78 | WNW | WNW | Fine |
| 9 | | | 35 | 43 | 32 | 30 | 03 | 30 | 10 | 84 | 83 | N | N | |
| 10 | | | 35 | 48 | 46 | 29 | 97 | 29 | 78 | 85 | 96 | WSW | W | sRain |
| 11 | | | 48 | 53 | 43 | 29 | 68 | 29 | 55 | 97 | 94 | WSW | SW | Fine |
| 12 | | | 45 | 53 | 36 | 29 | 54 | 29 | 40 | 93 | 83 | SW | WSW | Clo. |
| 13 | | 40, | 38 | 46 | 38 | 29 | 39 | 28 | 85 | 88 | 98 | WSW | ESE | Rain |
| 14 | ○ | | 39 | 46 | 38 | 29 | 98 | 29 | 14 | 91 | 78 | WNW | NW | Clo. |
| 15 | | | 40 | 46 | 33 | 29 | 46 | 29 | 67 | 82 | 80 | WNW | WNW | |
| 16 | | | 35 | 44 | 43 | 29 | 84 | 29 | 86 | 90 | 80 | W | S | Fog. |
| 17 | | | 46 | 47 | 38 | 29 | 79 | 29 | 97 | 91 | 90 | SSE | E | sRain |
| 18 | | 25, | 43 | 46 | 44 | 30 | 02 | 30 | 02 | 91 | 95 | NE | NE | |
| 19 | | | 45 | 47 | 43 | 30 | 04 | 30 | 11 | 88 | 98 | NE | NNE | sRain |

The quantity of rain fallen in the month of October was 1.09 inches.

NOTICES TO CORRESPONDENTS.

We have received an anonymous communication respecting Mr. Fay. We can never admit any anonymous communication in this Journal. The Author's name must at least be made known to the Editors.

Several Communications are received, and are under consideration.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

The Index to the preceding Volume will be delivered with the next Number.

*. Communications, and Works for Review, are requested to be addressed (post-paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 38 Fleet Street.

INDEX

TO

VOLUME III.—NEW SERIES.

-
- | | |
|---|---|
| ABDOMEN , extensive injury of . 347 | <i>Black, Dr.</i> , on the nature of fever 409 |
| Absorption, <i>Dr. Barry</i> on ... 63, 185 | — liquid, vomited in cancerous disease of the stomach..... 430 |
| Acupuncture, in suspended animation 68 | Blue disease, case of 424 |
| — in rheumatism of the heart 154 | Blisters, use of, in chronic diseases of the skin 57 |
| — in neuralgia 225 | — application and management of..... 537 |
| Albinos, constitution of 443 | Brain, cicatrix of wounds of 65 |
| Alimentary canal, diseases of, in children 117 | — foetal, anatomy of 15 |
| Analysis of the tartar of the teeth 455 | — functions of different parts of in fish 64 |
| Anatomy of the foetal brain 15 | — recovery from abscess of ... 70 |
| — of old people 75 | <i>Bretonneau, Dr.</i> , on diphtheritis, reviewed 488 |
| — and physiology, uses of..... 393 | Brome, a new substance, account of 450 |
| <i>Andral, M.</i> , his case of chronic dyspnoea 350 | Cainca, radix 85 |
| Aneurism 176 | Calculi, eight extracted from the urethra 348 |
| — of the aorta ... 63, 161, 270, 448 | Cancerous disease of the stomach 430 |
| Angina, membranous 551 | Cantharides, natural history of... 545 |
| Antidote to prussic acid 161 | <i>Capuron</i> on diseases of children, reviewed 1, 111, 201 |
| Aorta, rupture of the 538 | Carditis..... 46 |
| Arsenic, cases of poisoning with, 171, 234, 358 | Case of a lady born blind, who received sight at an advanced age 526 |
| Army, qualifications of medical officers in 180 | Catarrhal complaint, a peculiar one in children 273 |
| Ashby-de-la-Zouch, waters of ... 222 | — inflammation of the eyes ... 130 |
| <i>Bailey, Dr.</i> , on the circulation of the blood..... 49, 519 | Cerebral veins, inflammation of . 167 |
| <i>Barclay, Dr. John</i> , death of 458 | Chilblains, use of chloride of lime in 83 |
| <i>Barry, Dr.</i> , on absorption..... 63 | Chirurgia parva Lanfranci, reviewed 509 |
| — reflections on the theory of venous circulation 519 | <i>Christison, Dr.</i> , his cases of poisoning with arsenic... 171, 234, 358 |
| — on venous circulation and absorption, reviewed 185 | Chorea sancti viti 212 |
| <i>Baileman, Dr.</i> , life of 465 | Circulation of the blood . 49, 185, 374 |
| Bathing, <i>Dr. Cubitt's</i> essay on, reviewed 222 | <i>Clarke, Dr.</i> , on diseases of children, reviewed 1, 111, 201 |
| <i>Beaumont, Dr.</i> , his experiments on digestion 445 | <i>Cleoburey, Mr.</i> , on the diseases of the eyes, reviewed 128 |
| <i>Bennett, Dr.</i> , his translation of <i>Tiedemann</i> , reviewed 15 | |
| Beriberi 38 | |
| Bile, on the secretion of..... 165 | |
| Biographical notice of <i>M. Laennec</i> 547 | |

- College of physicians, in London 330, 522
 — list of officers of 556
 — of surgeons, in London, by-law, &c. 371
 Combustion, case of local 79
 Committee of inquiry concerning the sick poor 274
 Constitutional irritation, *Mr. Travers* on, reviewed 281
 Convulsions of infants ... 1, 111, 201
Cooke, Mr., on the *Lancet*, &c., reviewed 398
Cook's translation of *Dr. John Hall's* cases, reviewed 297
Cubitt, Dr., on bathing, &c., reviewed 222
 Cyanosis, case of, with dissection 424
- Death of *Dr. John Barclay* 457
 — of *M. Laënnec* 458
 Dental surgery, principles of 317
 Dentition, diseases of 122
 Diarrhœa of children 119
 Diet in tabes mesenterica 76
 — of pulmonary invalids 77
 — *Dr. Paris* on, reviewed ... 89
 Digestion, *Tiedemann and Gmelin* on, reviewed 378
 — experiments on 267, 445
Digitalis 269
 Diphtheritis, *Dr. Bretonneau* on, reviewed 488
 Diseases of children 1, 111, 201
 — monthly report of, 86, 182, 276, 374, 462, 557
- Dis, Mr.*, his case of extensive injury of the abdomen 347
 Dropsy, use of radix caince in ... 85
 Drunkenness, use of acetas potassæ in 63
Dunghison, Dr., on diseases of children, reviewed 1, 111, 201
Dunlop, Miss, case of 425, 526
 Dysentery, efficacy of nux vomica in 445
 Dyspnoea, chronic, *M. Andral's* case of 350
- Encephalitis 176
 Ergot of rye 159, 255
 Eruptions in children 423
 Erysipelas, contagious nature of . 42
 Evidence, chemical, in cases of poisoning 171, 234, 358
Ewing, Dr., his case of neuralgia 225
 Examination of the body of *M. Talma* 536
 External application of medicines 76, 537
 Extracts, preparation of 78
 Eye, diseases of 126
- Farming of the sick poor 274, 369
Fawdington, Mr., his case and pathology of melanosis, reviewed 479
Fever, Dr. Black on the nature of 409
 — continued, *Professor Laennec's* treatment of 435
 — intermittent 540
Frisk, Dr., on diseases of the eye, reviewed 126
 Fumigations, of camphor, in rheumatism 158
Gairdner, Dr., on carditis 46
 Gall-bladder, examination of liquid found in 434
Geoghegan, Mr., his letter to *Mr. Abernethy* 345
 Gout, pathology of 455
- Hall, Dr. John*, his observations on English bodies, reviewed ... 297
Hamilton, Mr., on the beriberi... 38
 Headaches, *Dr. Vaughan* on, reviewed 192
 Heart, case of wound of 439
 — observations and experiments on the action of 248
Heberden on diseases of children, reviewed 1, 111, 201
 Hernia, employment of sulphuric æther in 59
 — inguinal, without protrusion of peritoneum 163
 — strangulated, *Mr. Geoghegan* on 344
Houlton on the preparation of extracts 78
 Hunterian museum, letter concerning the trustees of 228
 Hydrocele in children 123
 Hydrocephalus acutus 215
 Hydrocyanic acid, experiment on 441
- Iliac, external, ligature of 69
 Incubation, artificial 441
 Indigestion, scheme for investigating causes, &c. of 166
 Infants, regimen of 1
 — diseases of 111, 201
 Inflammation of blood-vessels in variola 250
 Iodine in mineral waters 177
 Iris, chronic inflammation of 41
- James I.*, practice of physic in the reign of 297
James, Mr., case of presentation of placenta 226
Johnson, Dr. James, note from... 556
- Kennedy, Dr.*, on the management of children, reviewed 1, 111, 201

- King, Dr.*, on *Dr. Struve's* artificial mineral waters 146
- Koecker, Mr.*, on dental surgery, reviewed 317
- Konniis, or mare's milk, employment of 456
- Laennec, Professor*, his treatment of continued fever 435
- death of 458
- biographical notice of 547
- Lancashire lunatic asylum 553
- Lancet, *Mr. Cooke* on the evil tendency of the 398
- Lanfranci *chirurgia parva* reviewed 509
- Leucathiopia, or constitution of the Albinos 443
- Licentiate, letter from a 228
- Life of *Dr. Bateman*, reviewed... 465
- Liquid found in the gall-bladder, examination of 434
- Lithontriptic instruments 457
- Lixars* on the extraction of diseased ovaria, reviewed 135
- London University 229
- Lumbago treated by moxa 272
- Macartney, Dr.*, his lecture on the uses of anatomy and physiology, reviewed 393
- Mad village, the 160
- Male fern, oil of, against tænia... 269
- Marasmus 207
- Marrow of chirurgery 297
- Medical benevolent society 460
- feeling, state of 398
- jurisprudence 171, 358, 454, 552
- officers in the army, qualifications of 180
- profession, state of 330
- Medico-chirurgical society of Edinburgh, transactions of ... 32
- Mental disorders 177
- Mineral waters, artificial, *Dr. King* on 146
- iodine in 177
- Monthly report of diseases, 86, 182, 276, 374, 462, 557
- Morphium, test of acetate of 455
- Moxa 177, 272
- Neuralgia, *Dr. Ewing's* case of... 225
- Nitric acid, case of poisoning by . 438
- North, Mr.*, on the convulsions of infants, reviewed 1, 111, 201
- Nux vomica, efficacy of, in dysentery 445
- Old people, anatomy of 75
- Ophthalmia, exanthematous 32
- strumous 131
- purulent 132
- rheumatic 133
- Ovaria, extirpation of 135
- Ovarian dropsy, case of 541
- Ovary successfully extirpated, 276, 416
- hæmorrhage from 444
- Paris, Dr.*, on diet, reviewed 89
- Percussion, new mode of 85
- Pinta, or the blue-stain, account of 67
- Placenta, expulsion of 159
- presentation of, fatal 226
- Plague, *Ripa* on the 459
- Platina 457
- Poisons, modus operandi of 61
- action of on plants 169
- Poisoned wounds, on compression in 452
- Poisoning with arsenic, *Dr. Christison's* cases of 171, 234, 358
- from putrid food 372
- by nitric acid, case of 438
- by henbane 439
- Polyphagia, case of 265
- Poppy, indigenous, extract of ... 457
- Powdered glass, effects of 451
- Pregnancy, interstitial 444
- Prussic acid, antidote to 161
- Puberty, precocious, case of 456
- Pudenda, discharge of blood from in children 124
- Pulmonary exhalation, experiments on 452
- invalids, diet of 77
- Quinine, sulphate of 86
- administered by frictions... 537
- adulteration of 545
- Regimen of infants 1
- Religious instruction, influence of on lunatics 553
- Report, monthly, of diseases, 86, 182, 276, 374, 462, 557
- of the associated general medical and surgical practitioners 178
- of *M. Bally's* cases at La Pitié 538
- Rewards for scientific labours ... 442
- Rheumatism, use of acupuncture in 154
- Rubeola 539
- Sciatica treated by moxa 272
- Scientific institutions— London University 229
- Secale cornutum 159, 255
- Senn, M.*, on hydrocephalus acutus, reviewed 215
- Shearman, Dr.*, on the distinction between rheumatism and inflammation 340
- Sick poor, state of 83, 274, 369

| | | | |
|---|----------|---|----------|
| <i>Smith, Dr.</i> , his account of successful extirpation of an ovary... | 416 | Tænia, oil of male fern a remedy for | 269 |
| Spider, ascent of | 462 | Transactions of the Edinburgh Medico-Chirurgical Society ... | 32 |
| Spina bifida | 176 | <i>Travers, Mr.</i> , on constitutional irritation, <i>reviewed</i> | 281 |
| Spinal marrow, case of disease of | 263 | Tumour, account of, in the situation of the coccyx | 60 |
| Spleen, functions of | 422 | University of London | 229 |
| — circulation in | 536 | Urinary organs, diseases of, in children | 123 |
| Springs, warm, of Bourbonne les Bains | 458 | Uterus, subacute inflammation of | 70 |
| <i>Spurzheim, Dr.</i> , his letter concerning the case of Miss Dunlop | 425 | — discovery of two canals in .. | 73 |
| Stammering | 556 | — wanting | 78 |
| State of medical feeling | 398 | — amputation of neck of | 541 |
| — of the medical profession | 522 | Vaccination | 175, 457 |
| <i>Stevenson, Mr.</i> , on erysipelas ... | 42 | Variola | 549 |
| Stomach, morbid anatomy of | 450 | — inflammation of blood-vessels in | 259 |
| — <i>Soemmering</i> on | 81 | <i>Valsalva's</i> method employed in aneurism from a wound | 270 |
| Stricture of the urethra | 161 | <i>Vaughan, Dr.</i> , on headaches, <i>reviewed</i> | 192 |
| Suspended animation, acupuncture in | 66 | Veins, cerebral, inflammation of .. | 167 |
| Syphilis, treatment of, without mercury | 363, 532 | Venous circulation and absorption, <i>Dr. Barry</i> on, <i>reviewed</i> | 185 |
| Syphilitic infection, singular mode of | 175 | Vertebral column, dislocation and fracture of | 164 |
| Tabes mesenterica, diet in | 76 | Viper, bite of | 459 |
| <i>Talma, M.</i> , examination of the body of | 536 | <i>Wardrop, Mr.</i> , on exanthematous ophthalmia | 32 |
| Tartar of the teeth, analysis of... .. | 455 | — his account of the case of Miss Dunlop | 425, 526 |
| Teeth, carious, bad effects of | 62 | <i>Watson, Mr.</i> , on chronic inflammation of the iris | 41 |
| Temperaments, new doctrine of .. | 156 | | |
| Tendo Achillis, case of rupture of .. | 542 | | |
| Thermometer, new division of ... | 275 | | |
| <i>Thompson, Mr.</i> , on the use of blisters | 57 | | |
| Thymus gland | 442 | | |
| <i>Tiedemann and Gmelin</i> on digestion, <i>reviewed</i> | 378 | | |
| — on the fetal brain, <i>reviewed</i> .. | 15 | | |

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THE
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R E P O S I T O R Y
AND
R E V I E W.

EDITED BY

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CONTENTS

OF

VOLUME IV.—NEW SERIES.

PART I.

REVIEW.

| | PAGE |
|--|------|
| 1. Mental Disorders | 1 |
| 2. On Sudden Death | 25 |
| 3. Morbid Anatomy of the Brain | 37 |
| 4. Materia Indica | 40 |
| 5. Causes of Unsuccessful Termination of Extraction by the Cornea | 49 |
| 6. On Verminous Diseases | 97 |
| 7. On the Physical History of Mankind | 112 |
| 8. On Moxa | 145 |
| 9. Anatomical History of Inflammations | 160 |
| 10. On the Autumnal Fevers of Savannah | 193 |
| 11. On the Treatment of Protracted Cases of Indigestion .. | 207 |
| 12. On the Disinfecting and Medicinal Chlorurets | 219 |
| 13. On the Improvement of Medical Education | 228 |
| 14. Anatomical and Pathological Researches | 250 |
| 15. Mental Disorders | 281 |
| 16. On the Teeth and Gums | 307 |
| 17. Diseases of the Skin | 313 |
| 18. On the Surgical Pathology of the Larynx and Trachea . | 328 |
| 19. Life of Dr. Jenner | 377 |
| 20. On the Natural System of the Nerves | 402 |
| 21. An Introductory Lecture on Surgery | 411 |
| 22. Epilepsy | 473 |
| 23. Morbid Sensibility of the Stomach and Bowels | 489 |
| 24. Anatomical History of Inflammations | 508 |
| 25. Diseases of Females | 518 |

PART II.**COLLECTION OF MEDICAL FACTS, WITH
OBSERVATIONS.****SECTION I.—ORIGINAL PAPERS.**

| | PAGE |
|---|-------------|
| 1. Expediency of Addressing Public Religious Instruction to the Insane..... | 51 |
| 2. Practical Observations on Sloughing, and Phagedæna of the Genitals. By B. J. NIND, Esq., Surgeon | 339 |

**SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND
FOREIGN, WITH REMARKS.**

| | |
|--|-----|
| 1. Use of the Polygala Senega in Ophthalmia..... | 56 |
| 2. Dr. PHYSICK's Operation for Artificial Anus | 58 |
| 3. Phenomena of Drowning..... | 60 |
| 4. Recovery from Drowning — Case of | 63 |
| 5. Extracts from the Report of Diseases observed in the Hôtel Dieu | 65 |
| 6. Inflammation of the Womb | ib. |
| 7. Fistula Lachrymalis..... | 66 |
| 8. M. ANDRAL on Phthisis Pulmonalis | ib. |
| 9. Formation of Tubercles | 68 |
| 10. Incontinence of Urine | ib. |
| 11. Sudden Death | ib. |
| 12. Fungoid Tumour removed from the Breast | 69 |
| 13. Hydrophobia | ib. |
| 14. Gall-Bladder Wanting—Case of | ib. |
| 15. Portions of a Fœtus found in the Scrotum of a Male Infant | ib. |
| 16. DUPUYTREN on Congenital Luxation | 169 |
| 17. External Application of the Deuto-Ioduret of Mercury.. | 171 |
| 18. Remarkable Effect of different Preparations of Opium .. | 173 |
| 19. Employment of Acetate of Morphia in Cases of difficult Menstruation | ib. |
| 20. Intestinal Suture | 174 |
| 21. Diseases of the Nails | 175 |
| 22. On the Employment of Hydrocyanic Acid in Chronic Affections of the Lungs | 176 |
| 23. Use of Nitrate of Potash in Hæmoptysis | 177 |
| 24. On the State of Fecundity in different Parts of Europe .. | 258 |
| 25. Human Bezoar..... | 260 |
| 26. Phebitis successfully treated by Moderate Compression. By M. GOUPIL..... | 348 |
| 27. Encysted Tumour of the Abdomen spontaneously emptied through the Bladder..... | 349 |
| 28. Diphtheritis | 350 |
| 29. Case of Inflammation of the Gall Bladder, combined | |

| | PAGE |
|---|------|
| with Nephritis and Inflammation of the Urinary Bladder. By M. O. BALLY | 350 |
| 30. Memoir upon the Œdema, or Induration of the Cellular Tissue of Infants. By C. BILLARD | 351 |
| 31. Existence and Use of the Cephalo-Rachidien Fluid | 353 |
| 32. Composition of the Fluid found in the Vertebral Canal.. | 354 |
| 33. Case of Malconformation of the Bladder and the Organs of Generation. By HENRY VERNON, M.D..... | ib. |
| 34. Account of a Child's taking Stramonium. By C. D. MEIGS, M.D. | 422 |
| 35. Vaccination of Animals | 423 |
| 36. Vaccine Society of Philadelphia | 425 |
| 37. Variolæ Vaccinæ in the Horse | ib. |
| 38. Académie Royale de Médecine, Jan. 20, 1827 | ib. |
| 39. Formation of an Artificial Urethra, on account of a Malconformatron of the Genital Organs | 426 |
| 40. Extraordinary Case of Chronic Inflammation of the Omentum, &c. in a young Girl | 427 |
| 41. Case of Vesical Petrification. By C. L. CATRA | 428 |
| 42. On the Formation of Sand in the Plexus Chloroides of the Brain. By Dr. BERGMAN | ib. |
| 43. Clinique de la Pitié | ib. |
| 44. Case of Rupture of the Liver, &c. By Dr. GUERARD, jun. | 429 |
| 45. Removal of the Os Astragulus. | 430 |
| 46. Directions for Making and Keeping Morbid Anatomical Preparations in Hot Climates. By JOHN DAVY, M.D., F.R.S. | ib. |
| 47. Comparative Number of Male and Female Children.... | 433 |
| 48. Benefit of the Climate of Madeira in Phthisis..... | 434 |
| 49. Directions for Using the Lunar Caustic. By JOHN HIGGINBOTTOM, Esq. | 435 |
| 50. Facts relative to Paraplegia. (From a posthumous MS. of the late Dr. BAILLIE.)..... | 535 |
| 51. Peculiar Effects of Lightning | 536 |
| 52. Sharp or Blunt Lancets in Vaccination | 537 |
| 53. Permanent Evidences of Perfect Vaccination..... | ib. |
| 54. Beneficial Effects of Oxide of Sodium and Calcium. By J. G. F. HASSEL, M.D. | 538 |
| 55. Articulation lost for many Months from a Chronic Affection of the Stomach. By G. STRAMBIO | 540 |
| 56. Gangrene of the Lungs | 541 |
| 57. Complete Obstruction of the Jejunum by a Biliary Calculus | 542 |

SECTION III. — INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

| | |
|--|----|
| 1. Experiments upon the time required for Substances introduced into the Animal System to be discovered in the Urine | 70 |
| 2. Effects of Ergoted Rye upon Man and other Animals .. | 72 |

| | PAGE |
|--|------|
| 3. Use of <i>Uva Ursi</i> in Phthisis | 75 |
| 4. Medical Uses of the Madár | 78 |
| 5. Supposed Hermaphroditas | ib. |
| 6. Monstrosity observed in China | 79 |
| 7. On the Confinement of Dry Gases over Mercury | 80 |
| 8. Caffein | ib. |
| 9. Iodine found in the Mineral Spring of Bonnington, near Leith | 81 |
| 10. Fluidity of Sulphur at common Temperatures | ib. |
| 11. Detection of Arsenic | 82 |
| 12. Spontaneous Perforation of the Oesophagus and Stomach | ib. |
| 13. Notice of Animal and Vegetable Substances found at Thebes and Memphis | 83 |
| 14. Statistic Note on the Matti Lunatic Asylum | 85 |
| 15. Death of M. PINEL | 89 |
| 16. SAMUEL COOPER'S Surgical Dictionary | 90 |
| 17. Medical Intelligence:—Prize Essays, 90—University of Glasgow, 91—Regulations of the University of Phila- delphia | 93 |
| 18. Clinical Report of the most prevalent Diseases during December | 94 |
| 19. State of the Sick Poor | 177 |
| 20. Extracts from the Letter of a Physician travelling in Italy | 183 |
| 21. Asphyxia | 184 |
| 22. Medical and Surgical Proceedings | 186 |
| 23. Pulmonary Apoplexy | 188 |
| 24. Artificial Incubation | 189 |
| 25. Death of Dr. JOHN MASON GOOD | ib. |
| 26. Clinical Report of the most prevalent Diseases during January | 190 |
| 27. Memoir upon the Separation of the Umbilical Chord .. | 260 |
| 28. Observations upon the State of the Brain and Nerves in some kinds of Monstrosities | 262 |
| 29. Notice of a Peculiar Acid | 263 |
| 30. Mortality of Prisons | 264 |
| 31. Monthly Report of Prevalent Diseases | 265 |
| 32. Case of Uterine Hæmorrhage successfully treated by Transfusion | 266 |
| 33. Drs. NORTH and GREGORY on Vaccination | 270 |
| 34. Remarkable Spontaneous Cure of Aneurism, with Ob- servations on Obliteration of Arteries | 274 |
| 35. Analysis of the Water of the Moira Baths | ib. |
| 36. Analysis of Concretions found in a Cyst in the Mesentery of a Bull affected with Tubercular Phthisis | 275 |
| 37. Extraordinary Accident | ib. |
| 38. Hunterian Society | 276 |
| 39. Clinical Report of the most prevalent Diseases during February .. | 277 |
| 40. On the Tendency of the Medical Writings of Dr. KITCHINER | 355 |

CONTENTS.

vii

| | PAGE |
|---|------|
| 41. On Medicine, with relation to Princes | 367 |
| 42. On the Alleged Communications between the Lymphatics and the Veins..... | 360 |
| 43. Comparative Diseases of the Tailors, Carpenters, and Bakers, in Hamburgh | 361 |
| 44. Extracts from the Bills of Mortality of Berlin for the Year 1825..... | 362 |
| 45. On the Relation between the Tartar of the Teeth and the Saburral Crust of the Tongue. By Dr. P. S. DENIS . | 363 |
| 46. Treatment of Artificial Joint by Excision of the Ends of the Bone | 364 |
| 47. Partial Removal of the Humerus in the Hamburgh Hospital | 365 |
| 48. Account of an Epidemic Disease ascribed to Rye-Bread . | ib. |
| 49. On the Marks by which the real King's Bark may be distinguished from the Carthagena Bark. By Dr. G. H. STOLZE | 366 |
| 50. Case of Spontaneous Depilation..... | 367 |
| 51. Dysmenorrhœa | 370 |
| 52. Upon the Pathological Anatomy of Elephantiasis. By M. ANDRAL, fils | 371 |
| 53. Rupture of the Duodenum | 373 |
| 54. Artificial Nose | ib. |
| 55. Amputation of the Neck of the Uterus | 374 |
| 56. New Method of detaching the Placenta from the Uterus | ib. |
| 57. Clinical Report of the most prevalent Diseases during March | 374 |
| 58. On the Divisions at present existing in the Profession . | 440 |
| 59. Memoir of the late Dr. WALKER, of Richmond | 442 |
| 60. Decline and Fall of the White Mustard-Seed | 445 |
| 61. Mr. DAGLISH's Report on Vaccinia, &c. | 447 |
| 62. National Vaccine Establishment | 451 |
| 63. Homœopathia | ib. |
| 64. On the Chemical Process performed in Respiration . . | 454 |
| 65. Suicides in the Prussian States | ib. |
| 66. Œsophagus communicating with the Trachea | 455 |
| 67. Spontaneous Rupture of the Vena Cava Abdominalis . . | ib. |
| 68. Cicatrisation of Nerves | 456 |
| 69. Treatment of Cerebral Inflammation | ib. |
| 70. Treatment of Cancer by Compression | ib. |
| 71. Case of Obstinate Epistaxis | 457 |
| 72. Salivation cured by Calomel | ib. |
| 73. Ligatures of Silk-worm Gut | ib. |
| 74. Speculum Vesicæ | 458 |
| 75. Calculi in the Vesicæ Seminales | ib. |
| 76. Experiments on the Reproduction of the Crystalline Lens. By MM. COCTEAU and LEROY, Drs. in Medicine .. | ib. |
| 77. Hardening of the Skin in Infants | 460 |
| 78. New Substance discovered in preparing Picrotoxine .. | ib. |
| 79. Treatment of Articular Rheumatism. By M. MARTINET | ib. |
| 80. On the Extract of Belladonna in Intermittent Fever . . | 462 |
| 81. Practice of Professor RASORI in Intermittents | ib. |
| 82. Yellow Fever | 464 |

| | PAGE |
|--|------|
| 83. Spreading Ulcer of the Nose | 464 |
| 84. Increase of Population | 465 |
| 85. Death from the Bite of a Viper | 466 |
| 86. Death from a Bite by a Cock | ib. |
| 87. Mania from Sobriety | 467 |
| 88. Experiment on Absorption | ib. |
| 89. New Method of Treating Asthma | 468 |
| 90. Case of Asphyxia, with Recovery after many Hours . . | ib. |
| 91. Death of Dr. ABEL | 469 |
| 92. Clinical Report of the most prevalent Diseases during April | ib. |
| 93. Observations on the Clinical Instruction of the Parisian Medical Schools | 542 |
| 94. Case of Acute Inflammation of the Spinal Marrow . . | 548 |
| 95. Case of Poisoning by Sulphuric Acid | 550 |
| 96. Case of Mollities Ossium | 552 |
| 97. Cicatrisation of Ulcers promoted by Chloruret of Sodium | 553 |
| 98. Medical Casuistry | ib. |
| 99. Theory of Vision | ib. |
| 100. Hypertrophy of the Stomach | 554 |
| 101. Diseases of the Ear | ib. |
| 102. Statistics | 555 |
| 103. Identity of Vaccine and Varioloid Matter | ib. |
| 104. Prize Questions | ib. |
| 105. Case of Intermittent Epistaxis | 556 |
| 106. Medical Studies | 557 |
| 107. On the Pulse | 559 |
| 108. London University | 561 |
| 109. State of the Sick Poor | 562 |
| 110. National Vaccine Establishment | 563 |
| 111. Practice of Midwifery by Men | 564 |
| 112. Sulphate of Quinine | ib. |
| 113. Researches into the Intimate Structure of the Inter- vertebral Ligaments. By M. PAILLOUX | ib. |
| 114. Clinical Report of the most prevalent Diseases during May | 565 |

MONTHLY MEDICAL AND SCIENTIFIC BIBLIOGRAPHY.

| | | |
|--|-------------------------|-----|
| Literary Intelligence | 95, 470, | 586 |
| Monthly Record of Works received for Review, 95, 191, 278, | 375, 470, | 566 |
| Meteorological Journal | 96, 192, 280, 376, 472, | 568 |
| Notices to Correspondents | 192, 280, | 472 |
| Quarterly Report of Prices of Substances employed in Phar- macy | 278, | 566 |

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VOL. XXVII.

No. XIX.—NEW SERIES.—VOL. IV.

PART I. R E V I E W.

I.

MENTAL DISORDERS.

Traité des Maladies du Cerveau et de ses Membranes. Par A. L. I. BAYLE, Docteur en Médecine, &c. *Maladies Mentales.* A Paris, chez Gabon et Compagnie. 1826. 8vo. Pp. xxviii.—596.

A Treatise on Diseases of the Brain and its Membranes. By A. L. I. BAYLE, M.D. *Mental Disorders.* Paris. Gabon and Co. 1826. 8vo. Pp. xxviii.—596.

De la Paralyse, considérée chez Les Aliénés, Recherches faites dans le service de feu M. Royer-Collard et de M. Esquirol. Par L. F. CALMEIL, Docteur en Médecine de la Faculté de Paris, Premier Interne en Médecine à la Maison Royale des Aliénés de Charenton. A Paris, chez J. B. Baillière; A Londres, même Maison. 8vo. 1826.

On Paralysis, as it appears in Lunatics. Researches made in the service of the late M. Royer-Collard and M. Esquirol. By L. F. CALMEIL, M.D., of the Faculty of Paris, and Senior Medical House Pupil at Charenton. Paris and London. Baillière. 8vo. 1826.

DISORDERS of the mind have, in all ages, excited the greatest interest and the most earnest attention among rational beings. The value of faculties by the exercise of which men feel themselves raised above all the classes of animals, and endowed with dominion over them, is appreciated even where the elevation of the human character is least marked, and where its advantages are made the least use of; whilst, in proportion to the cultivation of the understanding, men become more strongly convinced that all the other blessings of their condition are less important than the continued enjoyment of intellectual power.

When we consider with what difficulty the character,

VOL. IV. NO. 19.—NEW SERIES.

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limits, and order of the faculties of the sound mind have been ascertained and described, we cease to wonder that the state of the mental powers in different forms of disturbance to which they are liable has been hitherto very imperfectly delineated; but when the many laborious attempts at description of the phenomena of madness already existing are contemplated, it does seem a little strange that so little progress has been made in tracing them with precision to morbid affections of those parts of the animal economy which are the organs of intellectual manifestation, and that such singular discrepance of opinion should yet exist among those who have cultivated this particular branch of enquiry with the greatest apparent care: some, for instance, denying the possibility of demonstrating any physical imperfection in the organ of thought in numerous cases of insanity, and others asserting that in every case such imperfections are constant and palpable. The evidence on this highly important subject being so contradictory, nothing more valuable could be presented to the medical reader; to the physiologist, the metaphysician, and the philosopher, than a careful record of numerous cases and dissections made by a man of known veracity and good faith, whose opportunities of attending to diseases of the mind have been ample and peculiar, and who has sufficient ability to accompany such a record with clear general views, and to deduce from them such conclusions as a diligent mind, in the course of an inquiry of this nature, could not overlook. Dr. Bayle's book on the Diseases of the Brain and its Membranes may, with considerable justice, be said to be a work of this kind; a little too prolix, undoubtedly, and rather too copiously abounding in repetitions, but full of faithful, minute, and important information, the result of many years of inquiry, observation, and reflection, during which the author was an in-pupil of the splendid establishment at Charenton, perhaps the first institution for lunatics in the world. Numerous patients, of both sexes, are admitted into this establishment, and they chiefly belong to wealthy families, or to those in easy circumstances; the arrangements of the hospital being also, in many particulars, regulated with a view to the prosecution and improvement of knowledge connected with the condition of its unfortunate inmates. On the admission of patients, the most exact investigation is made into their previous history; and as no regulation exists at Charenton by which the patients are dismissed when their death seems probable, examinations after death are very frequent. Dr. Bayle's work contains details of about sixty cases, most of which are related at some length: the morbid appearances of all of these (with the exception of the few

the subjects of which recovered), as found on dissection, are given with much exactness; and these examinations form, we believe, only a small part of those he was enabled to make himself in the course of the first two or three years of his residence at Charenton. To these he has added about twenty cases from other authors.

It seems that he did not proceed far in his investigations without adopting particular opinions respecting the general causes of mental disorders, and to illustrate and prove the truth of these opinions is the object of the present volume, one half of which is filled with a detail of cases. Admitting that in some rare cases only of mental alienation the disorder depends on a specific or sympathetic irritation of the brain—and that certain cases of monomania and melancholia have their primary origin in some deep and permanent lesion of the moral affections, or in a predominating error which subjugates the will of the patients, and thus gives rise to exclusive delirium—and that idiocy ordinarily depends on some innate defect in the conformation or organisation of the brain,—Dr. Bayle maintains, and in this consists the peculiarity of his opinions, that the *greater part* of mental disorders are the result of primitive chronic inflammation of the membranes of the brain: to the understanding of which it is necessary to give a passage from the introduction to his work.

‘ Sometimes this inflammation is seated in the external and free surface of the cerebral arachnoid, and in the arachnoidean fold of the dura mater; and sometimes it begins in the pia mater, which is more or less injected, and in the internal or adherent surface of the cerebral arachnoid, from whence it may extend at a later period to its external surface, and sometimes even to its arachnoidean fold. In both these cases it almost always affects the ventricular arachnoid. This distinction, which may appear subtle, is, however, of the greatest importance. It will be seen that these two kinds of chronic inflammation of the encephalic membranes have different anatomical characters, and perfectly distinct symptoms. To the former I give the name of *chronic* or *latent arachnitis*, because it has its seat chiefly in the arachnoid; and to the second, that of *chronic meningitis*, because it at once affects the pia mater and the arachnoid.’—P. xxiv.

In the volume now given to the public, it is the latter of these forms of disease only which is treated of, that is to say, mental alienation, with incomplete paralysis, as a consequence of chronic meningitis. This form is very frequent. It was the character of one-fifth of the cases among men, and of one-twenty-eighth of the cases among women, in 1500 lunatics. The cases given by Dr. Bayle are divided into seven series: the *first* series contains those in which chronic

meningitis occurred with the usual symptoms and appearances (hereafter to be described); the *second*, those in which there was also abundant serous effusion, and considerable, though incomplete, paralysis; the *third*, those in which the chronic meningitis was complicated with more or less extensive inflammation of the cortical substance of the convexity and inner surface of the hemispheres, and was accompanied with spasmodic affections; the *fourth*, those in which there were false membranes between the two folds of the arachnoid; the *fifth*, those in which chronic meningitis was complicated with various cerebral affections; the *sixth*, those which proved capable of cure; the *seventh*, cases extracted from different authors, who had attributed no importance to the appearances of chronic meningitis, which, nevertheless, they presented. Of the symptoms referrible to each of these series, we shall have to speak when we reach the second part of the work: the cases which compose them are so arranged as to present clear views of the disorder in all degrees of severity, and all varieties of complication, and to justify, we think, most of the conclusions drawn by the author from a consideration of the whole. From these cases, it would not be at all useful to make any selections, since each forms part of a class in which particular symptoms were uniformly co-existent with, and probably dependent upon, particular morbid appearances. The general results will in all probability be far more readily comprehended, if we speak of them according to the order of subjects in the second part of the treatise; for, as Dr. Bayle has satisfied himself, that he can not only refer different affections of the intellect to distinct appearances of disease, but that in a great proportion of cases, the commencement of the disease is what he has denominated a chronic meningitis, he has justly conceived it necessary to give a clear description of the morbid affection so designated, and of the forms, stages, and complications of it to which different classes of symptoms, and different stages of mental malady, appear to him to be clearly traceable. The second part of his work is therefore devoted to a consideration of the causes, anatomical characters, general history, symptoms, and treatment of chronic meningitis, of which we shall now proceed to give an account.

By the term *chronic* meningitis, Dr. Bayle does not mean a disease which has supervened on an acute affection, but a distinct affection, the name of which is meant to signify the slowness of its progress, and its long duration.

It is more common in men than in women; the proportion observed at Charenton in 182 who were affected with this malady, having been 158 males to 24 females, the explanation of which is of course to be chiefly found in the greater

exposure of men to some of the causes of the disorder, such as violent moral affections, intemperance, injuries of the head, &c. It was never observed in children, nor even before the age of twenty-five; but between the ages of thirty and fifty it was very frequent, after which it is gradually more rarely observed as individuals advance towards old age.

‘ We find, therefore, that it does not occur in the most stormy period of life, when men, carried away by the violence of passion, give themselves up to all kinds of excesses; but manifests itself at that age when they have attained the fulness of their faculties and functions, and when, from their anxiety to establish a family, or to acquire honours and fortune, they are governed by ambition, and consequently exposed to the evils of disappointed hope, and to various misfortunes.’—P. 404.

Most of the persons affected with chronic meningitis were of sanguine temperament and robust constitution; not of very remarkable powers of intellect; sometimes of active imagination; and not given to the eccentricities which precede some other forms of insanity; but of impetuous character, proud, impatient of contradiction, vain, and given to wild speculations. A very great proportion of Dr. Bayle’s cases are those of military men, who had shared the fatigues, the dangers, and the glories of the brilliant enterprises of France under Napoleon, and who had seen in the fall of their master the end of all their hopes. The influence of the tremendous political events by which their fine country has been harassed within the last thirty years, was particularly shewn in the delusions cherished not only by this description of maniacs, but by those who had been occupied in a civil capacity: in almost all the cases we find the patients believing themselves to be directors of France, generals, kings, or emperors, and possessed of vast territory, extensive influence, and boundless wealth. Some of them were not satisfied with these privileges, but claimed, like Alexander, divine descent; an opinion which was vindicated by one of them in the following curious letter:—

‘ Sir,—I cannot conceal from you my extreme astonishment on learning that the cause of my detention at Charenton is a suspicion of madness, on account of my declaring myself to be the son of Jupiter. Very well! you may convince yourself of it by accompanying me to Olympus. Do you think, that if I were a man of ordinary birth, I should possess all those scientific attainments which adorn my mind and my heart with all the flowers of the sublimest eloquence? Do you think I could have related with such vehemence, impetuous, warlike audacity, the high transactions of all the republics of Greece and Rome? and could I have restored to the Iliad its primitive colouring, as it sprung from the genius of Kanki,

who lived many millions of ages before the deluge of Ogiges? A second hour sufficed me to make an epopée, embracing the universal history of Greece, of Rome, and of this great and generous France; the same space of time to execute a painting of immense and prodigious dimensions. I think I have sufficiently vindicated my birth, and sufficiently established that Jupiter is my father, and the divine Juno my tender mother; I therefore beg, sir, that you will have the goodness to intercede for me, to restore me to my family and my divine parents: I shall cherish a divine gratitude for this favour—a gratitude eternal as the life of the gods.

Dr. Bayle lays much stress on hereditary disposition; and it is melancholy enough to be told, that with respect to nearly half of the patients it was found that their relations, and generally their parents, had been either similarly affected, or had laboured under some other description of mental affection, or suffered from paralytic or apoplectic attacks. The disease was traced in a few examples to imprudent exposure to the sun; and, in several, to injuries, wounds, or accidents. A great proportion of the patients were given to immoderate drinking. Some striking examples of the dependance of the malady on suppressed menstruation occurred to the author, in one of which the sudden restoration of that function was accompanied by as sudden a recovery of mental health. In one-sixth of the cases, hypertrophy of the heart was found to exist, although its existence had not been particularly indicated during life. Suppression of habitual hæmorrhoidal discharges is frequently mentioned among the predisposing causes; and in some examples, the disease came on on the disappearance of cutaneous disorders.

The moral causes which appear to dispose to this chronic meningitis, are almost always of the depressing kind: it seems seldom or never to ensue from severe intellectual labour, and is very rare among men of science and literary persons. In general, the disease is produced by the concurrence of several of the above causes, of which the effect is either a sudden or a slow sanguineous congestion in the vessels of the brain, and particularly in the pia mater. When this condition of the vessels takes place with suddenness, the attack is decidedly apoplectic; in other cases the congestion takes place slowly, is less severe, and produces less marked results; as, diminished powers of sensation, slight paralysis of the lower extremities, or other symptoms which gradually yield to proper treatment. In the latter description of cases, the patients find themselves subject to sleepiness, and to uneasy feelings about the head, in consequence of which they cannot go on with their occupations; with occasional embarrassment of the articulation. Sometimes the symptoms are altogether

so slight as to escape the notice of common observers; an altered tone of the voice, a certain slowness of delivery, and a step less assured.

The anatomical characters of chronic meningitis are certain lesions of the pia mater and arachnoid, and also of the cortical substance of the brain. The pia mater is the seat of more or less sanguineous congestion, and of serous infiltration; the arachnoid is opaque and thickened, and also contains serum in its cavity: its cerebral surface contracts adhesions with the cortical substance, and its free surface presents granulations, albuminous exsudations, false membranes, or clots of blood. Some of these appearances are constantly found; others are only occasional: their invariable seat is that portion of meninges which covers the convexity and inner face of the hemispheres, with the subjacent part of the brain, the ventricular arachnoid, and the arachnoidean fold of the dura mater which is contiguous to the hemispheres.

‘ These lesions, which are always more marked towards the centre of the convexity of the hemispheres than at their anterior or posterior part, go on diminishing towards the base of the cranium, where they completely disappear. In more than a hundred dissections, I have only seen three or four cases where they also existed at the inferior surface of the brain, and then only in a feeble degree. The meninges of the cerebellum are always perfectly healthy, even when the internal face of the corresponding dura mater is affected. We shall by and by see what consequences are to be deduced from these circumstances relatively to the functions of different parts of the brain.’

Perhaps the best view of the disorder so fully treated of by Dr. Bayle, and of its complications, is afforded by the following

‘ *Table of the Anatomical Characters of CHRONIC MENINGITIS, and of the State of different Organs in Individuals in whom the Disease was fatal; from 100 Examinations after Death.*

‘ Opacity, thickening, increased consistence of the cerebral arachnoid covering the convexity and inner face of the hemispheres; sanguineous injection and serous infiltration of the subjacent pia mater; serosity in the cavity of the arachnoid; thickening of the ventricular arachnoid, granulations on its surface, effusion of serum in the ventricles - 100

‘ The same lesions extending to the meninges of the base of the brain - - - - - 3 or 4

‘ Considerable effusion of serum in the ventricles, with distension and dilatation of those cavities - - - 30

‘ Adhesion of the meninges (arachnoid and pia mater) to a greater or less extent of the convolutions of the hemispheres,

| | |
|---|----|
| with injection and superficial softening of the gray substance in the points of adhesion - - - - - | 51 |
| ‘ False membranes, of variable thickness and extent, in the cavity of the arachnoid, on the arachnoidean fold of the dura mater - - - - - | 18 |
| ‘ Arachnoidean fold of the dura mater more or less injected or red, to variable extent - - - - - | 25 |
| ‘ Effused blood, fluid or coagulated, between the two folds of the arachnoid, with or without false membranes - - - | 13 |
| ‘ <i>Complicated with different Cerebral Lesions.</i> | |
| ‘ With more or less extensive softening of the brain - - - | 7 |
| ‘ With a fibrous tumour in one of the hemispheres - - - | 1 |
| ‘ With acute arachnitis, and suppuration at the base of the brain - - - - - | 1 |

‘ *State of the Dura Mater and Brain.*

| | |
|--|-----|
| ‘ Dura mater adhering to the cranium - - - - - | 6 |
| ‘ Ossifications in divers points of the internal surface of this membrane - - - - - | 4 |
| ‘ Increased firmness of the brain - - - - - | 21 |
| ‘ Decreased firmness of the brain - - - - - | 17 |
| ‘ Brain more or less injected - - - - - | 43 |
| ‘ Cortical substance softer than the medullary - - - - - | 100 |
| ‘ Considerable increase of firmness of the tuber annulare - - | 1 |
| ‘ Considerable increase of firmness of the medulla oblongata - - - - - | 1 |
| ‘ More or less distinct and extensive ossification of the vertebral arteries, and of the basilar and cerebral arteries - - | 3. |

It is unnecessary to insert the remainder of the table, which relates to the appearances presented by the other organs of the body. In the greater number of subjects there was no appearance of emaciation; and several were even remarkably fat. Chronic pleurisy existed in several. Hypertrophy of the left ventricle of the heart in fifteen. In forty-one of the cases the mucous membrane of the stomach or intestines, or both, was more or less red, thickened, &c., as a consequence of chronic gastritis or enteritis. One example is mentioned in which the stomach was displaced; but in no case does the displacement of the colon seem to have been met with, although this has been, we think, rather frequently remarked by Esquirol and others in the examination of the bodies of maniacs.

The symptoms which usher in the form of mania associated with chronic meningitis do not differ much from those which precede other mental disorders; and, like them, are very variable, as well as sometimes altogether unobserved. Impairment of memory, inaptitude for business, heaviness

of the head, and sleepiness, are not unfrequently noticed. In other cases there is an evident excitement; the individuals thus affected become vain and domineering, full of impracticable projects, enthusiastically devoted to some new study: they talk much, and often with talent, and some degree of elegance, and are in the highest degree exasperated by contradiction. Others are as much depressed. But of all the precursory symptoms of chronic inflammation of the meninges, none is more frequent, according to M. Bayle's experience, than a slight embarrassment of the speech, a hesitation and slowness in the pronunciation of particular words, and sometimes even a slight degree of stammering. This is often the only symptom which precedes mental alienation. Some difficulty in the movement of the lower extremities is sometimes remarked. The disease in its progress presents three groups of symptoms, on the foundation of which the author has divided it into three periods or stages, the period of monomania, mania, and dementia; a division alone sufficient to shew that in the course of the disease it presents the aspect of every variety of mental disturbance.

In the *first* period, or that of monomania, ambitious ideas and general excitement are united with some traces of general but incomplete paralysis. The patients suddenly think themselves rich and powerful, possessed of boundless wealth, elevated to the highest rank, endowed with the most precious and varied gifts of genius: their loquacity is excessive,—they sing, and laugh, and are full of gaiety, and the face is generally flushed and impressed with the inexpressible satisfaction they feel: at the same time their faculties are evidently weakened, they are found to have forgotten important events in their lives, and are unequal to the performance of their usual duties, although in conversation they will manifest a cleverness even greater than natural to them. In this stage of the malady, the speech is generally affected, and the gait of the patient unsteady; the latter symptom, however, is not constant,—and both are most observable when the patients are least excited. All these symptoms pass on to greater intensity. The patients become more restless, more talkative, more decidedly aspiring and ambitious: they sing, they gesticulate, they declaim, and seem *au comble de la félicité*. Some are governed by a more sedate, but not less engrossing, ambition; and in these, as they are more tranquil, the defects of speech and movement are more marked: they stammer when they come to particular words; their steps are unsteady; they drag their feet; or they cannot walk in a straight line. The digestive

functions are in this stage generally unimpaired; the patients look well; and the pulse is full, but not frequent. This first period of the disorder is of variable duration; longest when the disorder is least violent. Sometimes it only continues a few days, or a few weeks; more commonly it lasts about six months: occasionally it continues a year, or even two or three years.

The *second* stage, or period of the malady, is not always very distinctly divided from the first, but consists of an increase of all the symptoms. The delirium becomes more general; the mental faculties are more disturbed; the paralysis is more sensible. The patients are now less able to answer questions in a rational manner.

‘ They are extravagant in every thing, but wholly possessed with ideas of fortune, opulence, and grandeur. No other objects occupy their minds, nor can any be put in the place of them. All these ideas are incoherent, but not always in the same degree: thus, some will form coherent sentences, but sentences unconnected with those which precede or follow them; others will pronounce an infinity of isolated words without meaning or connexion. The first possess millions, and thousands of millions; they are princes, kings, emperors; they walk a hundred leagues in a day; they have broken the bridge which leads to the moon; they have the power of resurrection; they have flame and lightning in their eyes; they can expand themselves at will; their head is made of gold and diamonds; they can compose a hundred tragedies, a thousand poems in a day; every thing has been done by them, and every thing belongs to them, &c. &c. The second are almost always pronouncing the words, millions, thousands of millions, golden horses, golden castles, diamonds, king, emperor, god, &c., in an isolated and incoherent manner.’—P. 501.

When the disease has made this progress, the movements of the patients are almost incessant, they are in a continual hurry about nothing, and scarcely conscious of their own existence: they tear their clothes, and destroy whatever comes into their hands; and in this violent state the paralytic symptoms do not appear, although they are again seen when there is a remission. In this stage, as in the first, the appetite is good, often indeed voracious; and the patients preserve their embonpoint and their strength, unless their agitation is very great and very prolonged. The duration of this stage is also very uncertain, and it passes gradually into the next.

The *third* stage, or that of dementia, sometimes, however, follows immediately after the first. In short, M. Bayle is much too fond of divisions and subdivisions: not content with dividing the malady into three stages, which stages are

not constant parts of it, he divides the third stage into three parts or degrees, which, as they, equally with the greater divisions adopted by him, pass with more or less rapidity, and more or less sensibly, one into another, we shall merely speak of as one. The third stage, then, is but an aggravation of the first and second: the mind is more overthrown, the paralysis is more general; there are paroxysms of more violent agitation, and occasional convulsive actions: the increase of the affection to this degree is often gradual; but sometimes this state is suddenly produced by an attack of cerebral congestion; the patients fall down, are more or less insensible, and affected with local or general palsy, from which symptoms, if properly treated, they partially recover; and then the third stage commences. In this stage the patients are less noisy, but generally quite as restless; often preserving a sullen silence, but sometimes violently agitated. They walk like drunken men, and their urine is not unfrequently passed involuntarily. Apoplectic seizures are not unfrequent in this stage of the malady, and always leave the patient in a more imbecile state than he was in before. The faculties gradually become almost wholly obliterated: the patients answer questions by monosyllables, and frequently not until the question has been loudly repeated: the paralytic affection extends, and the face acquires a remarkable immobility: the speech becomes more difficult; some patients when they speak close the jaws between each syllable, so as to create an interval, as *em-pe-reur*; others cannot speak at all without difficulty; and in some the lips and tongue are observed to be affected with tremor. The motion of the lower limbs becomes more and more impeded: the paralysis extends to the sphincters, and the excretions become involuntary: the pharynx also becomes affected, and deglutition difficult,—and as the patients try to swallow their food rapidly, they are sometimes choked from this circumstance. It has been already said, that in the first and second periods of chronic meningitis the appetite remained good, or was rather increased than diminished: in the third stage of the disorder, it is voracious and insatiable, and some of the patients grow enormously fat; but diarrhœa often comes on, and then the patients sink rapidly into a state of marasmus. The pulse is very little affected, except when ulcerations, which often occur in such a state, have taken place to some extent, in which case it becomes small and frequent. The skin acquires a particular dryness, and a dirty, earthy character. When these symptoms have supervened, death generally takes place very soon; but some of the patients linger on until the mind and body are brought more and more

under the influence of the disease, and the human being sinks into a state inferior to that of the brute creation. But even to the last, unless there is diarrhoea, the appetite for food continues great, the patients continue very fat, the pulse remains full without additional frequency, and the respiration is natural.

During the stages of chronic meningitis which have just been described, it is by no means uncommon for various convulsive or spasmodic affections to occur; and these may appear in the first stage, and continue with the third, or they may come on only in the last period: in both cases, when they do occur, they commonly continue until death. The first affection classed under this head is the continual agitation of the body, so commonly observed in maniacs, carried to the utmost excess. Patients in this condition have no attention for what passes around them, but are in a state of agitation and blind fury, and dangerous to all about them.

‘It is difficult to give a faithful picture of this state, in which the whole locomotive apparatus is incessantly engaged in executing the most violent and irregular movements. Thus the patients talk incessantly, uttering words totally incoherent, difficult to be understood, or quite unintelligible,—sometimes words which belong to no language; and sometimes only a confused and inarticulate noise. They sing, cry, vociferate, shake themselves about in their chair, move the head backward and forward, from side to side, or rotate it as far as they can; bend and extend their limbs, stiffen themselves out, strike the boards with their feet, try to break their fastenings, &c. &c. The face participates in this general disorder, and is continually troubled and agitated.’—P. 517.

We cannot be surprised to be told that such dreadful agitations as these, continued without intermission, are soon followed by emaciation and death. But sometimes the patients are only periodically affected in this manner, or in paroxysms, and then less violently: such paroxysms may last a whole day, but more commonly a few hours only, and are accompanied with redness of the face, heat of skin, frequency of pulse, and general perspiration.

Grinding of the teeth is a common symptom in patients affected with chronic meningitis, often in a very violent degree. Tremors, particularly of the head and the superior extremities, are often observed; and convulsive movements of the limbs or trunk in every degree and every variety. Permanent contractions, generally of the muscles of the limbs, sometimes of the neck, often take place in the third stage, and continue till death. Tetanic extensions also occur sometimes; and epileptic seizures are common, and now and then fatal.

The duration of chronic meningitis varies from two months to ten or twelve years. Its mean duration M. Bayle states to be from a year to a year and a half. Its fatality is very great: of one hundred and fifty-nine patients, one hundred and fifty died; and of those who survived, only four or five completely recovered. Death seldom takes place in the first stage of the malady; not often in the second, and only from violent agitation. Recovery never takes place in the third stage. When the disease is complicated with some other affection, as, for instance, with chronic gastritis or enteritis, the latter is seldom recognised during life, the peculiar symptoms being for the most part wanting in consequence of the diminished sensibility of the patient.

Diagnosis.—In the chapter on diagnosis, M. Bayle, still attached to divisions and subdivisions, separates the considerations connected with it into four parts, including a very important attempt, founded on the numerous cases he has recorded, to refer several symptoms to distinct lesions, or stages of malady. These we shall separately notice presently. Chronic meningitis is particularly characterised by being preceded by an attack of cerebral congestion. If we learn, therefore, says M. Bayle, that a lunatic was attacked, before delirium came on, with an affection in which he lost, for a greater or less space of time, or to a greater or less degree, the powers of sensation and motion, we may confidently affirm that he is labouring under chronic inflammation of the meninges. It is, however, to be remembered, that the attack of cerebral congestion may have escaped notice, or may have been unknown to the patient's friends; and something further may be required towards the recognition of the disorder. Two symptoms are particularly characteristic of it: the first is the ambitious delirium, which always appears during some part, or pervades the whole, of the progress of the disease; the second is the incomplete paralysis, which is observed early, and by slight manifestations, but goes on increasing until it may be said to be complete. We have now to consider how the author explains the symptoms by the appearances after death; and we think no part of his work more deserving of attention than this. The principal phenomena of the disease, it will be kept in mind, are, delirium, excitement, agitation, and fury, general and incomplete paralysis, the prevalence of ambitious ideas, dementia and stupidity, apoplectic attacks, and spasmodic affections. We shall notice these in the order in which they have been mentioned.

Delirium.—The derangement of the intellectual faculties,

or delirium, in chronic meningitis, always depends on the irritation of the cortical substance of the convexity and inner face of the hemispheres by the inflamed state of the internal surface of the meninges. There is a constant relation between the lesion and the degree of disorder of the understanding.

Excitement, Agitation, Fury.—These are only other effects of the same cause, and indications of different shades of mental disturbance.

Incomplete Paralysis.—This symptom has by some authors been attributed to what, in somewhat vague language, they have termed an alteration of the vital properties of the brain; by others, it has been supposed to depend on ramollissement of the substance of the brain. M. Calmeil, whose opinions we shall more particularly notice by and by, accounts for the paralysis of lunatics by a chronic inflammation leading to a specific modification (*modification identique que nous n'avons pas su apprécier*). M. Bayle's investigations have led to conclusions at least more intelligible, and, as we think, more reasonable.

‘The facts and observations which compose the first part of this work must, I think, have placed it beyond doubt that paralysis is a constant symptom of chronic meningitis, and that it depends on compression of the brain, occasioned in the first and second stage by sanguineous congestion in the vessels of the pia mater, and in the last stage of the disease by the same congestion, and by a serous infiltration of the pia mater, and between the folds of the arachnoid, and in the cavity of the ventricles.’—P. 543.

The Prevalence of Ambitious Ideas.—The remarkable constancy of this symptom is, M. Bayle acknowledges, very difficult to explain. As a symptom of chronic meningitis, there was scarcely an exception to its appearance. He may not be considered to have explained much by saying, that he regards these ideas ‘as the indirect effect of the action exerted on the cortical substance, and subsequently on the whole brain, by the sanguineous congestion of the pia mater, and the inflammation of the internal face of the arachnoid, which lesions are always simultaneous in this malady;’ but as he seems to attach some importance to this explanation, we think it only right to afford the grounds of it in his own words.

‘Let us give the proofs of this proposition:—1. On opening the bodies of individuals who die of this affection, we constantly find a very considerable injection of the pia mater, the degree of which is often in proportion to the ambitious delirium under which the patients laboured.

' 2. The proximate cause of chronic meningitis is a cerebral congestion, sometimes coming on all at once, sometimes progressively and slowly. The apoplectic attacks which it occasions are often immediately followed by the manifestation of prevalent ideas of riches and grandeur.

' 3. Prompt and abundant sanguineous evacuations in the first and second stages of the malady, often diminish and sometimes remove these ideas immediately. But if the congestion increases, or if a fresh attack of apoplexy supervenes, the ambitious delirium becomes more considerable; or if it has been removed, re-appears. Numerous proofs of this proposition are given in the first part of this work.

' 4. The serous effusions have always a relation to the ambitious delirium inverse of that of the cerebral congestion, unless the latter happens also to be strongly marked: in other cases, the greater the quantity of serum between the folds of the arachnoid, in the tissue of the pia mater, and in the ventricles, the slighter and less marked are the ambitious ideas, and *vice versâ*. Sometimes, indeed, when the serous collections are very abundant, they do not exist.

' 5. But this sanguineous injection of the pia mater is not the *only* organic condition connected with the prevalence of ambitious ideas: if that were the case, these ideas would be met with in individuals attacked with simple cerebral congestion, which is not the case. The *second* cause consists of an irritation, or of an inflammation of the internal surface of the cerebral arachnoid. It is a fact proved by daily observation, and one on which M. Lallemand has laid much stress, that the affections of this membrane are always accompanied with delirium, whilst this symptom is not observed in the diseases of the cerebral tissue itself.* This is constantly exemplified in acute arachnitis. In the second volume of this work it will be shewn, that the external or free surface of the serous covering of the brain, is susceptible of primitive inflammation, as well as the inner surface, giving rise to a particular kind of alienation. In the kind of alienation in which there is no cerebral congestion, there are no ambitious ideas.

' 6. We constantly meet with traces of inflammation of the arachnoid on opening the bodies of lunatics who were under the influence of ambitious ideas and had symptoms of paralysis.

' Thus if, on the one hand, these ambitious ideas do not exist when there is simple sanguineous congestion of the pia mater, nor when there is arachnitis without congestion of the same cellulovascular membrane; if, on the other, this particular series of ideas always coincides with the union of these two affections, we have a right to conclude that one depends on the other. But how do congestion of the pia mater and inflammation of the arachnoid give rise to ambitious ideas?—P. 548.

We finish our quotation by this interrogatory, which is

* ' Which doubtless depends on this circumstance, that the cerebral tissue is never primitively altered in both hemispheres at once, whilst a great extent of both hemispheres is irritated in inflammations of the meninges.'

not, we think, of a nature to be very readily answered. We question whether Dr. Gall, or his more enthusiastic coadjutor, or all the Phrenological Societies of Europe, can answer it satisfactorily; or, with all the facilities of an elaborate theory, vindicate the organ of ambition, or rather those of self-esteem and a love of approbation, in this instance. These organs occupy, as M. Bayle remarks, but a point of the convexity of the hemispheres, whilst the inflammation of the meninges always extends over the whole of their surface. The singular history of phrenology will be curiously completed, if, cradled as it was in minute healthy anatomy, it should find its grave in the further investigation of morbid structure. That the first principles of that science (if the ingenuity which has been exercised upon it deserves the name of science) are correct, and founded in nature, must, we think, be obvious to every man of the least observation; but that the subtle distinctions and minute divisions in which its cultivators have delighted, are fanciful, and irreconcilable with any rational system of metaphysics, is, we think, no less obvious to common sense. With respect to the ambitious ideas which have been so often mentioned, they seem to be a natural consequence of certain states of excitement; and more we are unable to say.

Dementia and Stupidity.—These symptoms, like those of paralysis, have always a direct relation to the compression of the brain by serous effusions. They are, in fact, marks of paralysis of the mind. The affection which was first most marked in the organs of motion, spreads to the organs of intelligence.

Apoplectic Attacks.—These attacks, which so commonly occur at the commencement, or during the course of chronic meningitis, are the result of a sudden sanguineous congestion in the vessels of the pia mater and brain, which is sufficiently proved by the good effects of blood-letting in these cases, as well as by the absence of effusion and any cerebral alteration, and by the presence of considerable injection of the pia mater in those who die in them.

Convulsive Motions.—These, in M. Bayle's opinion, and according to the appearances in the cases recorded in the third series of those related in the first part of his work, are the effect of an inflammation of the gray substance of the hemispheres consecutive on chronic meningitis. This opinion, which is at variance with what is advanced by M. Lallemand,* is founded on the following considerations:—

* M. Lallemand, after shewing that ramollissement of the brain is the result of inflammation, which also produces spasmodic contractions, main-

‘ 1. Partial inflammation of the white substance of the brain frequently gives rise to spasmodic phenomena in the side of the body opposite to that of the cerebral lesion, as proved in the works of M.M. Lallemand and Rostan.

‘ 2. Whenever I have seen well-marked convulsive affections in the course of chronic meningitis, and the patients have died, I have found a more or less extensive consecutive encephalitis of the convolutions of the hemispheres.

‘ The anatomical character by which this inflammation is recognised consists of a superficial ramollissement of the gray substance, with adhesion of the internal surface of the meninges to the brain, in the situation of that alteration of structure. The extent of this encephalitis is very variable, and produces different degrees of intensity and different forms of spasmodic phenomena: thus, the inflammation of a great part, or of the totality of the surface of the hemispheres occasions more or less violent spasmodic agitation, continued or periodical, and epileptic attacks; whilst, when this inflammation is more circumscribed, and limited to a more or less considerable number of points in the gray substance of the two hemispheres, it produces less violent and less general spasmodic movements, such as grinding of the teeth, tremors, convulsions, contractions, with rigidity and tetanic extensions.’—P. 559.

In some rare cases, in which fluid is suddenly effused on the surface, or in the ventricles of the brain, attacks of an epileptic form are produced; and the same phenomena may be induced by mere irritation of the gray substance in very irritable individuals without inflammation; and M. Bayle also thinks, that in some cases there may be a degree of inflammation of points of the convolutions without convulsions.

To conclude the subject of diagnosis, the symptoms of chronic meningitis differ from those of other mental maladies in being caused by attacks of cerebral congestion, and accompanied by general and incomplete paralysis, and ambitious ideas. Cerebral congestion may cause general and incomplete paralysis, but delirium and the ambitious ideas are wanting. Acute arachnitis is always attended with delirium, but without any traces of the prevalent ideas of riches and greatness: the symptoms also of this disease are more acute, and its progress is more rapid. It is not very likely to be confounded with other affections.

Treatment.—It is impossible to read the copious details connected with morbid anatomy in M. Bayle’s book, and we may add in numerous very scientific Parisian medical publi-

cations that simple affections of the arachnoid produce the same spasmodic affections as ramollissement, and distinguishable only from those produced by that affection, inasmuch as they are not followed by paralysis.

cations, without feeling an occasional suspicion, which at first has the appearance of being a little ungenerous, that the opportunities of prosecuting this branch of knowledge among our neighbours often arise out of the inertness of a practice too feebly opposed to the 'tendency to death.' We believe a conviction of this nature is beginning to be felt by the rising school of French practitioners, and we might refer for the grounds of this belief to several works which have been from time to time noticed in our own pages. M. Bayle, we are quite justified in saying, condemns the plan pursued in the cases related by himself, the treatment of which, it is to be observed, was in no degree under his direction, but regulated by M. Royer-Collard. M. Bayle was his pupil, and simply a witness of the plan which exhibits what he so justly terms a 'frightful proportion of deaths to the cures.' Indeed, M. Royer-Collard's treatment seems to have been persevered in through all experience, and, notwithstanding accumulated and most eloquent dissections, with a complete disregard to what he must, if he had reflected on what he saw, have known to exist in the cases before him. If he thought the disease had made much progress, he did nothing, (*se contentait de prescrire une boisson délayante*); and though he ordered leeches to the neck, or to the anus, when the patients *complained* of pain in the head, he never had recourse to bleeding excepting on the supervention of apoplexy, in which circumstances also he ordered purgative clysters and sinapisms. In the early stage of the disease, particularly when there was excitement and agitation, he limited himself to giving antispasmodic and anodyne medicines; in a later stage these were abandoned for ptisanes, to which were sometimes added camphor, or the acetate of ammonia. Occasionally he employed blisters, or setons, or ordered moxas behind the neck, and from these means M. Bayle says he has seen considerable advantage. He also, in some cases, tried the plan of Rasori, of giving tartar emetic in large doses; but suspended it, from finding that it aggravated the symptoms. In one case some temporary benefit was derived from this plan. We think we are warranted in saying that if he had neglected Rasori and employed the same medicine in moderate doses, he would have had better reason to be satisfied with it.

Instead of persevering in a method of treatment which is beyond all question signally unsuccessful, M. Bayle proposes measures more active, and apparently better adapted to moderate and suppress the disease, which so many dissections have clearly shewn to exist when the symptoms of what he calls chronic meningitis are manifested. These measures he

has divided into the preservative and the curative: the first would certainly be very important, if patients who have a tendency to this malady could be persuaded that they were really in want of medical discipline; but the very nature of the malady, the excited spirits, the lively hope, the splendid fancies which belong to it, all tend to assure the patient that he is not only not at all ill, but that he never was so well in his life. It is in vain to recommend leeches, evacuations, abstinence, and a quiet life, to a man whose gaiety is to him a source of the highest enjoyment. These are difficulties which must present themselves in practice; and although a little restraint, even thus early, would be very serviceable, the prejudices, or the tenderness, or the fears of friends and relations do not always make it practicable; and the state of the patient is allowed to get daily worse, until some accident, or some surpassing extravagance, invests his medical attendant with professional and moral power. When sanguineous congestion undoubtedly exists, M. Bayle very properly recommends that our chief reliance should be on general and local blood-letting, of which the effects are sometimes, he says, instantaneous. It is hardly necessary to say that such measures should be promptly resorted to, and occasionally repeated, as well as seconded by the employment of purgatives, in addition to which the author recommends sinapisms to the feet.

‘A consideration of the different forms taken by the symptoms of chronic meningitis have caused me,’ says M. Bayle, ‘to divide the disorder into three periods; but viewed with relation to its intimate nature, its therapeutical indications and treatment, it has in reality but two periods. The first, which comprehends the stages of monomania and mania, is that during which the pia mater is the seat of more or less powerful sanguineous congestion, and when an inflammatory action exists between the internal surface of the meninges covering the hemispheres on the one part,* and the corresponding face of the convolutions on the other. The second, which comprises the stage of dementia, is that in which there is congestion of the pia mater; together with serous infiltration of that cellulo-vascular membrane, and effusion of serum in the ventricles and between the folds of the arachnoid. We thus see that, in one stage; there is, 1st, slight compression of the brain by sanguineous congestion, perhaps also by a little effusion; 2dly, general irritation of the same organ, and often even consecutive inflammation of a more or less considerable number of points of its surface, in consequence of the inflammatory state of the internal surface of the meninges; and that in the other stage the encéphalon is wholly under the influence of sanguineous or of serous compression, espe-

* ‘The ventricular arachnoid is also inflamed.’

cially the latter. From hence it arises that the treatment should be divided into two parts.—P. 577.

The treatment recommended by M. Bayle is founded on these divisions: the principal means of an active kind, particularly in the commencement of the malady, being general blood-letting. This practice seems to have got into disgrace in Paris, and particularly with that great authority M. Pinel, by having been at one time indiscriminately employed in the treatment of lunatics at the Hôtel-Dieu: but of its advantage in some forms of mania there can be no reasonable doubt. M. Bayle is a little inclined to prefer bleeding from the foot; and certainly thinks that bleeding from the jugular vein is more beneficial than from the brachial veins. When there is amenorrhœa, or when a habitual hæmorrhoidal discharge has been suppressed, he recommends leeches to the anus or genital organs. One bleeding is not always sufficient: if the excitement and agitation, if the delirium and paralysis of the tongue, are not decreased, that measure must be repeated. If the agitation and delirium cease after bleeding, and the paralysis instead of being removed advances, further evacuation of blood must not be resorted to, unless apoplectic or epileptic symptoms should call for it. The latter symptoms may, however, depend, as well as the increasing paralysis, on the progressive effusion, in which case further blood-letting would probably add to the mischief; and M. Bayle thinks such cases can only be known by the effects of blood-letting. The chief means to be relied upon in the stage of effusion are moxa, blisters, and setons. M. Bayle thinks the first are most efficacious, and recommends that several should be applied at once, and repeated without much interval. Of cold to the head, purgatives, the cold affusion, &c., it is unnecessary to speak, or of the regimen and diet of the patients. We shall, however, add a passage in which the author speaks of some parts of the treatment pursued at Charenton, as auxiliary to means which are merely medical. After speaking of the care that should be taken to prevent the patients being exposed to the heat of the sun during great heats, and of the restraint that must be put on the voracious and insatiable appetite which attends this disease, he goes on to say:—

‘The moral treatment is in other respects the same as that which is adapted to all forms of mental alienation. It consists, first, in the removal of the patients from their relations, and their seclusion in an establishment for the reception of lunatics. When they are not so highly excited as to be hurtful to others or to themselves, they are allowed freely to exhaust their mobility, by loquacity, by

songs and cries, and by walking, &c. In contrary circumstances, or when they strike those about them, or break or injure what comes into their hands, or tear their clothes, their dress is taken from them, and replaced by a waistcoat with long sleeves, which can be tied round the body so as to confine the hands. When they cannot be made to keep themselves clean, every article of apparel is taken from them except their shift, and a sort of large linen cloak, with long sleeves, called *blouse*, is put upon them. If they are violent and furious, they are tied by strong bands to a large well-stuffed arm-chair, fixed firmly to the wall; but if their movements in this situation are so continual as to put them in danger of hurting themselves, they are enclosed in a kind of wicker basket, rather longer than the body, with two lateral openings for the arms, and having a cover with an opening for the head.—P. 580.

The author of the second book, of which the title is prefixed to this article, M. Calmeil, is a pupil of the same hospital, and has drawn his conclusions from an observation of cases occurring in the same establishment as M. Bayle. We have seen that general but incomplete paralysis is an essential part of the symptoms of chronic meningitis, and is attributed by M. Bayle to compression of the brain, in the first instance by sanguineous congestion, with perhaps slight effusion, and in a subsequent stage by a greater degree of effusion. M. Calmeil has taken the paralysis for his subject, as it occurs in lunatics; and, as his labours are unnoticed by M. Bayle, so, on the other hand, he notices that author in the slightest way possible; indeed merely in a note, without discussing the justness of the opinion above mentioned. This conduct, while it is not dignified in either party, although doubtless intended to be so, shakes the reader's confidence in both. Yet the opinions of both appeal for their support to the evidence of dissections, and those very numerous. In M. Bayle's work we are enabled, in consequence of his arrangement, to trace the supervention of one symptom on another in connexion with some new complication, or some further consequence of the original disorder within the cranium. M. Calmeil, by restricting his observations to one symptom—a symptom which never exists in an isolated state in the cases in which he has studied it, namely, in lunatics, has at least exposed himself to the danger of mistaking a co-existing lesion for the cause of a symptom which may not depend upon it. One circumstance is at least sufficiently clear: both authors mean the same disease, a general but incomplete paralysis, peculiar to lunatics, most frequent in male subjects, and affording grounds for an unfavourable prognosis whenever it is present. The disorder is first perceived in the speech, and soon in the lower extremities, in which, if not more marked than in the upper, it is at least more perceptible.

On looking at the cases related in M. Calmeil's book, after being occupied with those detailed in the work of M. Bayle, we cannot but recognise the similarity, we had almost said the identity, of the materials out of which each author has constructed his own theory : both have seen and noted facts so much alike, that some of the cases from one might be transferred to the pages of the other without injury to the consistency of the plan. In the descriptions of M. Calmeil we often find that there was no well-marked primary attack of congestion ; but the absence of this symptom is also observed by M. Bayle, who conceives it often to have existed when its existence could only be inferred from the imperfect evidence given concerning the previous state of the patient. The prevalence of ambitious ideas, on which Bayle has dwelt so strongly, although it is evident in many of Calmeil's cases, is not considered of much importance, or essentially characteristic of a particular disease, by the latter author. The parallel holds good also in the dissections ; for although Calmeil rejects the idea of the paralysis being dependent on effusion, yet we think we are correct in saying effusion existed in *all* his cases, either between the laminæ of the arachnoid, or between the membranes, or in the ventricles, and was always more copious when the paralytic symptoms had been most distinct. In the case related at page 185 of the work, headed *Paralysie générale au dernier degré*, there were six ounces of serum in the cavity of the arachnoid, and the brain was completely healthy. It is true, that in many of the cases there were, besides the effusion, adhesion of the pia mater to the arachnoid, and more frequently to the brain, with a change in the colour and consistence of the cortical or gray substance, a violet tint, and a diminution of firmness ; and on these M. Calmeil lays all the stress. M. Bayle would, we dare say, see nothing in M. Calmeil's cases to weaken his assertion of the paralysis being connected with the effusion, whilst he would attribute the tremors, the contractions, the extensions, the convulsions, which occurred in many of Calmeil's cases, to the inflammation of the gray substance of the brain ; and certainly *his* cases bear out his assertion. M. Calmeil, however, does not admit that there is any peculiar difference in the appearances after death in those who have had convulsions, which he says may arise from inflammation of any part of the brain (p. 266). We are much disposed to think that, if these two pupils of M. Royer-Collard had pursued their investigations together, they would have found much reason to join in giving the same testimony. M. Calmeil is probably correct in refusing to characterise the delirium of paralytic lunatics as always of

the same kind ; and, indeed, in noticing the divisions in which M. Bayle has classed the maniacal symptoms when combined with paralysis, we remarked the wide range and extensive connexions of these phenomena. Further, though the names of M. Calmeil differ from those adopted by M. Bayle, the progress of the disorder is manifestly the same. There is, first, impaired intellect ; then, ambitious mania : a man who can with difficulty articulate, and who cannot stand without holding the table, declares that he is the most powerful of emperors, and can rebuild Paris in four hours ; a Swiss soldier thinks himself emperor of France, having chariots and cannons of gold ; a custom-house officer calls himself admiral of France ; a Jew pretends to reign over the whole world ; a trumpeter imagines himself a colonel, and covered with decorations. To these symptoms succeed the stage of oppression and general paralysis. But we do not understand M. Bayle to contend, any more than M. Calmeil, for the invariable presence or uniformity of course of these symptoms. The extent to which our observations have already proceeded precludes the possibility of our making any remarks on several interesting parts of M. Calmeil's book ; we can merely inform the reader, that he considers, among the predisposing causes of paralysis in lunatics, the fatigues of a military life, excesses of all kinds, habitual exposure to a high temperature, &c. &c. ; and, confessing the difficulty of any attempt to associate the paralysis with any constant and specific lesion of the contents of the cranium, thinks that all the various appearances found on dissection shew a particular modification of cerebral inflammation, which modification he does not pretend to explain.

The state of the medulla spinalis, which we do not find at all noticed in M. Bayle's dissections, is only generally alluded to by M. Calmeil, as being in most instances healthy, though sometimes its cineritious substance had a violet tint, in subjects in whom the cineritious substance of the brain had acquired the same colour.

As regards the treatment of the form of insanity connected with general paralysis, the consideration of which is surely the most important circumstance in all inquiries of this kind, the distinctions of the two authors do not lead to any particular difference. According to both, the primary disease is active, the effects are difficult to remove, the general fatality is great ; and the only hope of better results is afforded by early and active treatment : and, if we were to go over M. Calmeil's directions, we should almost have to repeat those of M. Bayle. Such a coincidence was to be expected, both having acquired their practical knowledge in the same

excellent school, either under the late M. Royer-Collard, or with the advantage of the lessons of M. Esquirol, who, in this department of medicine, ranks as the most distinguished of living physicians.

In this article we have done little more than present the reader with the observations of others, thinking that their remarks, drawn from a large experience, must be more valuable than any speculations of our own on this still obscure subject. At the present stage of our investigations into diseases of the mind, and their physical causes, what we want is facts, recorded with a scrupulous adherence to truth. It must be after their production and accumulation, far beyond what we at present possess, that we can feel at all justified in deducing positive conclusions regarding the connexion of particular forms of madness with specific morbid alterations. M. Bayle has set a good example to other pathologists; and if we mention him singly, it is not that we undervalue the labours of M. Calmeil, but that we think the plan pursued by the former better adapted to advance us in the road to that knowledge which is the object of our researches. To the industry of both authors we pay a willing tribute: it is a quality which they possess, with many of their highly-talented countrymen, in a very conspicuous degree. Much yet remains to be accomplished by the industry of others; and we hope our own countrymen will not be behind. The mere description of the faculties of the mind has always been considered a noble occupation:

‘ *Divinum est opus*

Animam creare; proximum huic, ostendere.’

But the utility of such an undertaking bears no comparison with that of him who, not content with exhibiting in lucid order the mere phenomena of intellectual manifestations, extends his regards into the causes which impede their development, or impair their beauty and their order; for if reason be the most valuable gift of the Deity, to remove the obstacles to its free and perfect exercise must ever be a study of the highest dignity and importance. If, ‘of the uncertainties of our present state, the most dreadful and alarming is the uncertain continuance of reason,’ no efforts can more merit the gratitude of reasoning beings than those of which the object is to lessen that uncertainty, and thus to enable men to keep their exalted rank in the creation, and to fulfil all the destinies of their mixed and mysterious nature.

II.

ON SUDDEN DEATH.

Mémoires, ou Recherches Anatomico-Pathologiques. Mémoire sur les Morts subites et imprévues. Par P. Ch. A. LOUIS, Docteur en Médecine des Facultés de Paris, &c. Paris, 1826.

THERE is perhaps no problem in physiology more difficult of solution than that of determining the immediate cause of death in any given case. At the same time, there is no question respecting which so much misapprehension is entertained by unprofessional observers. By them, the animal body is considered far more material than it really is; and they can conceive no difficulty in ascertaining the reason, that death occurs. They, in truth, regard only the mechanical arrangement, entirely forgetting that more subtle power by which alone the corporeal machine can be brought into action. To the physiologist, however, the investigation into the cause of death has a far different aspect; and perhaps we do not exaggerate in saying that it is rarely satisfactorily discovered. But if this is true, or even nearly true, under common circumstances, it is still more correct when applied to cases of sudden death. These often happen without any trace of their cause being discoverable by anatomical investigation. Thus, a blow upon the stomach may kill instantly; and let the most skilful anatomist examine the body, without any information respecting the previous circumstances, and he will vainly seek for a solution of its cause. In fact, there is very seldom in such cases the slightest manifest change of structure.

Interesting, however, as the subject of sudden death is from its obscurity, it has of late years become still more so, from the great attention paid to medical jurisprudence. Sudden deaths are of much more frequent occurrence than we might on first thoughts suppose; and as medical men are always looked to in courts of justice to determine its cause, and as their qualification for the task is far more deeply inquired into than formerly, it is not less their interest than their duty to learn the exact state of physiological knowledge respecting it. The following table will shew that the cases of sudden death form a considerable proportion of those upon which inquests are held, and the consequent liability of medical men to be called upon to give evidence upon it. This list is taken from the register of inquests kept by one of the coroners for the county of Warwick; and the cases, with few exceptions, occurred in Birmingham and the immediate neighbourhood.

| Year. | Total Number of Inquests. | Number of Sudden Deaths. |
|-------|------------------------------|-----------------------------|
| 1813 | 72 | 18 |
| 1814 | 97 | 18 |
| 1815 | 94 | 33 |
| 1816 | 109 | 31 |
| 1817 | 96 | 24 |
| 1818 | 103 | 32 |
| 1819 | 109 | 43 |
| 1820 | 113 | 32 |
| 1821 | 92 | 18 |
| 1822 | 95 | 26 |
| 1823 | 145 | 17 |
| 1824 | 111 | 37 |
| 1825 | 106 | 26 |

How far this table may agree with the experience of other populous districts, we have no means of ascertaining; it is, however, very conclusive respecting one of the most densely inhabited parts of the country.

The difficulty attending the investigation into the causes of sudden death has its source in various circumstances; all, however, more or less comprehended in our ignorance of life, or of that matter, property, quality, or by whatever other name the philosophers or pseudo philosophers of the day may choose to denominate it, without which the mere animal machine is utterly unable to perform a single function. But in the inquiry which we are entering into we have no design of trespassing on this thorny path,—we are too deeply impressed with the present imperfection of knowledge, and far too sensible, that humility, and not presumptuous assertion regarding this subject, is most becoming to the real inquirer after truth to venture on a discussion which has eluded the labours, the inquiries, and even the hypotheses, of the very ablest men that have ever exercised their intellectual powers upon it. Our inquiries will be confined to the material organisation only, and how far a physiologist would be justified in ascribing death to any particular appearance of the anatomical structure of the body. Even here, however, difficulties almost innumerable present themselves; and it is only by a strict comparison of every circumstance, both of the phenomena during life, and the changes discoverable after death, that we can hope to arrive even at a probable conclusion. And, after all, we have to remember, that death ensues not merely upon the alteration of structure, but upon the suspension of all function; and hence our inquiry is, what change of structure is altogether incompatible with continuation of function? But there are

cases in which we may even discover the immediate cause of death where no visible change of structure appears, but where the organ is in a condition clearly manifesting that a suspension of function had place previous to actual death. To this we shall return more particularly in the course of the paper.

The first and certainly the very greatest difficulty that we meet with in inquiring into the cause of sudden death, is the total absence of organic alteration. This is not altogether a very rare occurrence, but is perhaps most frequently met with in children who die from convulsions, without previous illness. We have, however, met with this absence of all diseased appearance, where serious symptoms had preceded death for several days, and sometimes even for weeks. Circumstances, however, may justify us even in this case in referring death to some particular disorder or other.

Another and perhaps not a less difficulty originates from the fact, that death has often occurred under apparently very different lesions of vital organs; and we are, therefore, at a loss to determine how far any particular injury is adequate to induce a fatal event. Thus, with regard to the brain itself, an apparently slight blow not only deprives the individual of sensibility, but sometimes destroys life on the instant,—while, with other persons, far more serious injuries are either susceptible of cure, or life is at least sustained for a considerable time. Instances of both these phenomena have been given in this Journal during the last year and a half, and are indeed to be found in every periodical publication. Of the former, viz. where a cure was obtained, we may refer to a case of Mr. Welchman, sen., of Kineton, the particulars of which may be found in the Number for February 1826. Farther; instances have been recorded, where large portions of brain have been lost with impunity, contrary to the well-known and common consequence of cerebral injuries. There are also examples, where, though death has finally ensued, the individual has not only not died immediately, but has not even exhibited symptoms of severe injury. Not many months ago, we reported an instance of a man who had been struck *through the skull deep into the brain with a pickaxe*, and who walked a couple of miles directly upon the accident, though death was the result in a few days afterwards. Again; death sometimes happens under circumstances which, though fully sufficient to account for serious disturbance of health, would not lead us to expect any very sudden termination. Thus, in a case related by Dr. Carmichael Smyth, a young lady died very unexpectedly, although evidently suffering from some severe malady, and

upon examination, the only morbid appearances were an ulcerated opening through the parietes of the stomach, and inflammation of the peritoneum. In this instance, it is very manifest that we find only an exciting cause; but nothing to explain why death should have ensued suddenly. Had the disease been prolonged, and death gradually approached, the morbid appearances would have been deemed perfectly satisfactory. As the case, however, really terminated, the actual cause of death becomes a subject of inquiry.

These are a few of the difficulties by which this investigation is attended, and to which is owing the very little satisfaction that the examinations of dead bodies afford to deeply-thinking minds. Still, amidst the obscurity, dark and overclouded as it is, some light breaks in upon us; and which, although the *mere view* of structure remains as uninformative as formerly, enables us more accurately to appreciate the manner in which function may be suspended. For this we are entirely indebted to the intellect and the industry of Bichât.

Bichât employed himself to a very considerable extent in investigating the mode in which death occurs. Recognising in the outset three principal systems of the animal body, mutually influencing and influenced by each other, he taught that death might commence with either one of them, but must necessarily be followed by the death of the others, and consequently of the whole body.

If, then, the heart should die first, should cease its action, and fail to propel blood to the brain, this latter organ will cease to excite the nervous actions of the body, particularly the muscular. The intercostal, and all the respiratory muscles, will cease to act, and of course the lungs to be dilated. At the same time, it may be concluded, that the remainder of the body wanting its usual pabulum will cease to execute the usual functions. Again; should death commence in the brain, the respiratory apparatus will next fail; and, lastly, the circulation. Should, on the other hand, the lungs first cease to perform their office, the blood carried to the heart would be unchanged, would in this state reach the brain, annihilate its function, and through it that of the heart; this latter organ, however, being likewise influenced by the circulation of venous blood through its arterial system.

Now, it being determined, as it has been, by actual experiment, that death may commence in any one of these great systems, we have the foundation upon which to proceed in our anatomical inquiries; and we have only to ascertain that the function of any one has been obstructed, satisfactorily to

account for the eventual death of the whole body. Thus, therefore, the investigations of Bichât have very greatly simplified the subject, and have opened the way to, although they have not completed, the solution of the problem. In accordance, therefore, with the arrangement followed by him, we now propose to give the present state of our knowledge respecting the cause of sudden death, which we shall conclude with some observations upon the proper application of it to the purposes of forensic medicine.

The causes of sudden death may be divided into those which are known, and those which are unknown. They are called known, however, not because the actual and immediate link has yet been discovered, but because by a comparison with appearances after, and the symptoms preceding death, we may arrive at a rational conclusion respecting its *organic* cause.

The most clear causes of death are evidently such as are connected with the circulating system; and of these, hæmorrhage is the best ascertained. It signifies not from what organ, or from what vessel, hæmorrhage may proceed, provided only it is very profuse. In a very weakly habit, for instance, even a few leeches are sufficient to induce a fatal termination. A few weeks ago, a case of this kind came to our knowledge, where leeches had been applied in a late stage of fever for the relief of peritoneal inflammation. Their application was followed by immediate relief of the pain; but the nurse, under whose care the patient was left, suffered the bleeding to proceed, till death occurred from mere exhaustion. Nothing, however, in this case but observation during life could have informed us of the cause of its cessation.

When life fails from the bursting of an aneurism, whether internally or externally, no doubt can exist respecting the connexion of the morbid appearances with the fatal termination. In the same way, the influence of uterine hæmorrhage, though perhaps not to be recognised from mere anatomical investigation, can never be mistaken. Fatal hæmorrhage also has occurred from the Fallopian tube in extra-uterine conception,—an instance of which has been related by Mr. Langstaff, in the *Medico-Chirurgical Transactions*. It is unnecessary to dwell more upon this part of the subject, because it is scarcely in the limits of possibility, that any question should be raised upon it.

The morbid appearances in cases of *external* hæmorrhage can rarely be relied upon *alone*; they must be taken in connexion with the symptoms during life. In infants who have died from hæmorrhage from the umbilical chord, not a very common occurrence, we have seen the body almost void of

blood, and the muscles greatly bleached. In older persons this would naturally be less manifest, though still by examination of the lungs and heart we might arrive at something like certainty. As death, however, from hæmorrhage is more easily explained than from any other cause, so also is it less likely to be a subject of long inquiry before a coroner. Organic disease of the heart may, in the manner we are considering it, be always deemed a sufficient cause of death, because it may be a cause of the suspension of a function without which life cannot continue.

One of the most interesting of the known causes of death is where all the cavities of the heart are found perfectly empty, clearly proving that the action of this organ must have been suddenly suspended. There is reason to believe, that this source of death is very frequently overlooked, because it is not uncommonly without any accompaniment of organic change. In a child four years of age, which we examined some years ago, the emptiness of the cardiac cavities was the only unusual appearance observable throughout the body. The structure of the organ was perfectly sound; neither was there the slightest morbid alteration in the brain. This child had been very healthy till nearly nine months old, when it was first seized with a peculiar species of convulsion. The breathing became suddenly very difficult, extreme palpitation of the heart was observable, the face, lips, and the ends of the fingers, assumed a purple hue. There was partial insensibility at the same time. In this state the little patient continued for five or ten minutes, then its natural complexion gradually returned, and all the other symptoms vanished. The fatal attack was very sudden. The child, while playing with his brothers and sisters, suddenly screamed out, and died in an instant. It had been considered a case of malformed heart.

M. Louis has reported an instance of death in a girl of the same age, who had been suffering from fever and inflammation of the lungs. The following is the report of this patient for a few hours before her death:—

‘On the 11th the pulse and respiration were less rapid, the paroxysms of cough less frequent, and there was a sensible general improvement. At mid-day there was an exacerbation, with some prostration of strength. In the evening she was in good spirits, sat upon her bed, and continued to amuse herself as when in health till ten at night. She then fell asleep, and was awakened by a convulsive cough: at one she appeared in the same state as at ten; slept till three, and again awoke with a paroxysm of coughing: this soon ceased, and she complained of her mother, who had run to her, leaving her during the night, and died while pronouncing the last word.’

Upon examination, the heart was sound and quite empty. '*Cœur parfaitement sain et vide de sang.*' There were other appearances which served to explain the preceding symptoms; but nothing, if we except the emptiness of the heart's cavities, that will explain the suddenness of her dissolution.

In a body we examined during the last year, and some account of which we published in the clinical report for May, no organic disease was discoverable,—yet this man had been long subject to the symptoms of angina pectoris. The cavities of the heart, however, were perfectly empty, none of them containing any blood.

Now, in these cases it scarcely seems possible to doubt that death had ensued from a sudden suspension of the heart's action, and that we have the proof in the empty state of its cavities. What may have been the exciting cause of this spasm, we can only conjecture: this occurring, enough is found to account for death.

That, however, this state of the heart is really indicative of a preceding spasm, we have the best proof in some cases related by Mr. Chevalier, in the first volume of the *Medico-Chirurgical Transactions*. The symptoms in all these examples were precisely such as we should expect from a sudden interruption in the action of the organ.

In the first instance, a young lady complained of being faint, and desired to be laid down. She was supposed to fall asleep; but on examining her in about twenty minutes she was dead. The only circumstance to which death could be attributed, was the state of the heart. It was extremely flaccid, and there was not the smallest quantity of blood in any of its cavities. The uterus was in a state of impregnation.

The next case was equally striking. The individual, an elderly man, had recently recovered from mania; he fell suddenly from his chair, breathed short for a few minutes, and then expired.

'All the cavities of the heart were empty, but uncontracted; and the vena cava was also empty to the distance of several inches from the auricle. No other appearance could be detected in any viscus by which death could at all be accounted for.'

Now, in whatever manner we may attempt to explain this state of the heart, whether we imagine it the consequence of total and instantaneous abolition of function without any preceding spasm, or whether we believe a violent spasm to have preceded the ultimate cessation of the action of the organ, there can be no question of the immediate cause of death, viz. the complete want of circulation. Should, there-

fore, the heart be found empty in any case of sudden death, there can be no hesitation in ascribing the event to this state as a cause, and in giving evidence to this effect before a jury.

Though not immediately connected with the object of the article, we shall conclude this subject with the relation of two instances contained in Mr. Chevalier's paper, and reported to him by Mr. Woodd. They appear to shew more distinctly the nature of the affection, as well also as the treatment proper to be pursued when sufficient time is allowed for treatment to be instituted.

'CASE I.—At six in the morning of August 28, 1808, I was desired to visit Mr. A., who had been attacked about one o'clock with an uneasy sensation in the thorax, difficulty of respiration, and a sense of extreme lassitude. I found him with a pulse hardly perceptible, and not more than twenty-nine in a minute, although the vessels of the skin and tunica conjunctiva were loaded with blood. Previous to my being sent for, he had taken three large spoonsful of Reymer's tincture (a very stimulating preparation), and one bottle of a mixture which he generally kept by him, having been subject to spasms, and which contained *mist. camph. ʒvj. ; sp. lav. c. ʒss. ; sp. ammon. c. ʒij.* The anxiety still increasing, he took three tea-spoonsful of what appeared to be camphorated liniment, and some brandy. Notwithstanding all this, the action of the heart had decreased. When I saw him, the sense of fainting and difficulty of breathing became almost insupportable. I immediately gave him a tea-spoonful of æther vitr., and repeated it every ten minutes, till he had taken an ounce, but without the least effect either on the pulse or his general feelings: I therefore continued to give more stimulants; and by eleven o'clock he had taken, in various preparations, in addition to what has been before mentioned, *ammon. præp. ʒss. ; tinct. opii, gʒ. 40 ; tinct. castor, ʒss. ; ten drops of the medicine called the black drop ; and two drachms of the sp. ammon. comp. with camphor mixture.* At twelve, an enema, with sixty drops of *tinct. opii*, was administered, and two drachms more of æther had been taken. Friction had been used along the spine, with æther and volatile spirit, and also over the sternum. The pulse now became more perceptible, and gradually increased in strength till two o'clock, when he went to sleep, but with the breathing still laborious. At four o'clock he awoke; a blister was applied to the sternum, and he took a draught every four hours, composed of *gutt. nigr. gʒ. v. ; aq. ammon. acet. ʒij. ; mist. camph. ʒj. ; sal. c. cerv. gr. v.*

'On the following day he felt nearly recovered; nor did all this quantity of stimulating medicine produce the slightest degree of fever. He has ever since continued in health.

'CASE II. was much slighter. Mr. W., after a long walk, was suddenly seized with great difficulty of breathing and faintness, so as to be unable to stand, or speak distinctly. He was immediately

taken home, and I found his face suffused with blood, his breathing difficult, with great anxiety, and his pulse scarcely perceptible. He imagined himself dying. I gave him immediately two drachms of *sp. ammon. c.*, and in ten minutes one drachm of æther, and thirty drops of tincture of opium. In about twenty minutes he was relieved. A blister was, however, applied to the chest; and in the course of the evening he took a mixture composed of *conf. opiat. ʒj.*; *ammon. præp. ʒss.*; *aq. cinnam. ʒiij.* The next morning he was much better, and has ever since continued well.'

Mr. Chevalier appears to consider this affection as a species of asphyxia. That there is difficulty of breathing subsequently, is true; but still we think the first organ that suffers is the heart. It seems to us, that this view of it is confirmed by blue children who die suddenly, and whose death can only be referred to the malformation of the organ, from which all the symptoms proceed. It is manifest, however, that we yet want many links in the chain of causation, though from the uniform attendance of certain symptoms upon affections of certain organs, we can do no otherwise than connect the one with the other as cause and effect.

The next known cause of sudden death is that arising from effusion into the chest. Yet here again we are puzzled, by a fatal event sometimes occurring when there is very slight effusion, while in cases where it has been far more extensive, death has ensued only after a long illness and the gradual though complete exhaustion of the strength. Where, however, death has occurred in consequence of slight effusion only, this has generally taken place rapidly, and some explanation of the suddenness of death is supposed to be afforded in the suddenness of the effusion. There is reason to believe that the explanation has some foundation in truth; for when effusion takes place slowly into the lungs, it will always leave a considerable portion of their substance permeable both to blood and air; and that part in which the fluid is effused will gradually adapt itself to its new situation. There is not in this case any condensation of the organ, even when the effusion is extensive, and consequently very little comparative resistance to the influence of respiration or the freedom of the circulation. Both will be impeded according to the progress of the effusion; and extreme dyspnoea will not be experienced till the effusion is also extreme. Where, however, the effusion is sudden, the case is very different. Generally, under these circumstances, there is some, if not severe inflammation of the lungs, and these organs are already considerably condensed. The cellular structure, which we must consider as the seat of effusion, will not suffer the fluid to move through its meshes so easily as in the former case.

and a very small quantity may therefore be sufficient, materially to obstruct the mechanical part of respiration. But when we add to these considerations that unknown influence which all sudden changes in the condition of an organ have upon the vital power, we may readily conceive that sudden death may be the consequence of sudden effusion, however small in quantity may be the fluid effused.

Now an attentive examination of the symptoms preceding a fatal event in these cases will, we think, prove that such event may properly be ascribed to the effusion. There are instances related by M. Louis which the view above given serves to explain, and which, if the explanation be not allowed, cannot be explained at all. The first occurred in a patient who had been suffering under a slight febrile attack, and appeared to be recovering. His appetite had improved, when at eight o'clock in the evening he suddenly lost all sense and motion, and his respiration became laborious. He was bled, and sinapisms applied to his feet, but without the slightest benefit; and he died at five the next morning. Upon examination after death, a small quantity of serum was found in the ventricles of the brain; half a pint of a very red serum was in each of the pleuræ; the lungs were perfectly free, sound in the anterior part, at the posterior heavy, and both internally and externally of a deep red colour, and yielding by pressure a thick, frothy, blackish fluid.

The principal circumstance in this case that renders the cause of death doubtful, is the loss of sensation and motion, and on this account M. Louis considers the cause as unknown. It appears to us, however, that there was a double lesion, and both of them probably sudden: the first, effusion into the ventricles of the brain; the second, effusion into the cavities of the pleuræ, and infiltration of the lungs themselves. Whether either of these would alone have been sufficient, may be questioned. Had effusion only had place in the chest, the energy of the brain having been unimpaired, the lungs might in time have been able to have overcome their morbid condition, or at least to have adapted themselves to it. Had it occurred in the brain only, the lungs still continuing their action unimpeded, sensibility and motion might perhaps have been re-established; but both occurring together, the system was not strong enough to resist the double injury it had received. As also the symptoms of sanguineous apoplexy have been frequently found when dissection proved that serum only had been effused, we can scarcely consider even the loss of sensibility and motion in this case as unaccounted for; at the same time, the effusion into the chest was doubtless the principal source.

The next instance, like the last, was a case of fever, and the individual, a young man of twenty years of age, was convalescent. He walked during the day in the garden, with a fellow patient, and appeared in good spirits, but the air being rather cool, he experienced a slight shivering: at five o'clock in the evening he went to bed, and soon fell asleep. At seven his respiration was laborious, and attracted the attention of his comrades. His face became livid, and his arms were convulsed. The house-surgeon having been called, found him deprived of sensation and motion; his pulse accelerated, and his breathing tolerably easy. He died in the night, having remained insensible to his death.

The cerebral veins were found gorged with blood, the ventricles contained a small quantity of serum; but in each of the pleuræ there was a pint of very red serum, without the least clot of blood. The lungs were elastic, firmer than usual, and yielded by pressure a small quantity of dark frothy blood.

The same observations apply to this as to the former case, only that the affection of the chest was far more evident, and the lividness of the face plainly manifested that the blood had been very imperfectly changed in its passage through the lungs.

What, however, we would infer from these cases is not that the whole series of causes are distinctly known, but that there was fully sufficient found, upon examination, to account for death having suddenly occurred. We can never know the whole chain till we become acquainted with the manner in which the vital power is connected with the corporeal structure.

When death happens in individuals who have been long afflicted with water in the chest, there is reason to believe that true asphyxia occurs. Position appears sometimes to accelerate a fatal termination. Most of the cases of this kind that have fallen under our observation have taken place when the individual was inclining forwards. There can be no hesitation in ascribing the event, under such circumstances, to the effusion in the chest.

Apoplexy is the last cause of sudden death of which we shall treat in this article. It is certainly one of the most obscure among the known causes, for no other organ in the body seems so much to vary with respect to the power of enduring injuries as the brain.

Sanguineous apoplexy, meaning by this distinction apoplexy produced by extravasation of blood, or by congestion in the great vessels of the brain, no one can for a moment question as a sufficient cause of death; but when an individual dies with the symptoms of sanguineous apoplexy, as

they have been laid down by authors, and a slight effusion of serum alone has been discovered in the *post mortem* examination, it may raise a doubt in many minds how far the morbid appearances ought to be considered as accounting for the symptoms and the fatal termination. We believe, however, that at present we ought to consider any morbid appearances of the brain sufficient to explain preceding *cerebral* symptoms. We say at present, because till we do know more of the reason of the structure of the organ, and how far its mechanical arrangement is absolutely necessary to the perfection of its functions, we have no other criterion by which to decide. It is very manifest that with different individuals it varies as much as the other organs of the body, and exhibits as variable degrees of sensibility as the external skin, than which nothing can exhibit greater extremes. There are individuals to whom the slightest touch gives excessive pain, and they difficultly restrain from screaming upon injuries which others treat with the most complete indifference. We know a lady whose skin is so sensitive that by slightly passing her nail over any part, a wheal will immediately form, which will not disappear for some hours. In another lady, the application of a blister always produces extensive nettle-rash, which frequently has remained troublesome for several weeks afterwards.

Now; that we know not why such different effects should be produced by the same causes, does not in these cases prevent us from assigning the consequences to the external excitant, but we endeavour to explain them upon the supposition of peculiar constitution. Carry, therefore, the same reasoning to what appear slight injuries of the brain, followed by the most serious and even fatal results, and we have sufficient for the purposes of medical jurisprudence, though not for the satisfaction of the physiological inquirer.

There are also unknown causes of sudden death; such, we mean, as leave no change whatever in the anatomical structure of the body, nor any thing unusual in the condition of a particular organ. Such are deaths often from lightning, blows on the stomach, what has been termed nervous apoplexy, and a variety of others. Here the anatomist can plainly give no assistance, and even the physiologist can only conjecture.

Such is a very imperfect sketch of the causes of sudden death, which we have drawn up as some kind of guide for evidence upon this subject before a jury. We have ventured little into the regions of hypothesis, because we wished particularly to separate what may be considered ascertained, from that which is altogether a desideratum.

In applying what has been stated to the purposes of

forensic medicine, we cannot but observe upon a mistake that is frequently made by medical men in answer to a very common question from the coroner; viz. whether the appearances which they may have reported in any particular case, were sufficient to produce death? They appear to consider the question as one of abstract science, and not of individual application. The coroner asks as to one point, and they reply to another. Now the truth is, the coroner does not ask whether in *every* case the lesion would produce death, but whether it was sufficient so to do in that which forms the subject of inquiry? Farther; the object of the coroner is to further justice, and he is totally indifferent to every abstract speculation in physiology. The duty, therefore, of a medical evidence is to address himself to the same point, and to judge rationally from the individual case before him. Has a man died suddenly, and is there disease or malformation of the heart, there can be no good reason for not ascribing his death to this state of the organ, without any speculation as to how long he might have lived, or how long another man may have lived with the same lesion. We freely confess, that, in a physiological point of view, there is much in this that must and will remain unsatisfactory; nor can forensic medicine be considered perfect until to satisfy the legal inquirer and the physiologist the same evidence shall suffice. Such, however, at present, is the imperfection of our knowledge, that if medical evidence must be given, we must content ourselves with probabilities, more or less strong, as circumstances may admit. By wire-drawn distinctions or vague hypotheses, we may waste the time of a jury, but by no means advance the object for which they are assembled. Their inquiry is for judicial truth, and every thing to elucidate it should be brought forward, but nothing to obscure it. To discuss the physiological cause of death may be proper for a medical meeting, but never for a coroner's inquest.

III.

MORBID ANATOMY OF THE BRAIN.

The Morbid Anatomy of the Human Brain; being Illustrations of the most frequent and important Organic Diseases to which that Viscus is subject. By ROBERT HOOPER, M.D., Bachelor of Physic of the University of Oxford, &c. &c. Imperial quarto. London, Longman and Co. 1826. Pp. 36. Fifteen Plates.

THIS very beautiful work is equally creditable to the arts and valuable to the profession; and if the future numbers of

the publication of which it is the first specimen, convey equally correct and highly executed representations of the successive parts of the body which they are designed to represent in a state of disease, Dr. Hooper's illustrations will at least bear a comparison with, if they do not greatly excel all that have preceded them, either in this country or on the continent. Consisting, as the work does, of coloured plates, (fifteen in number,) with brief descriptions of the diseases which are represented, it does not call for or admit of a formal review ; but some account of the subjects may be interesting to many who hesitate to order a work necessarily expensive.

The first seven plates represent diseases of the membranes of the brain, inflammation with its consequences and adventitious formations : the remainder illustrate diseases of the substance of the brain, inflammation, with some of its terminations, and various tumours and vesicles, and extravasation. In the first and second plates we have a beautiful representation of the common effects of acute inflammation of the dura mater ; namely, first, an extreme vascularity ; and second, the formation of a membrane which is shewn in the different stages of its progress, from the state of solid and partly organised albumen to that of a membrane perfectly organised and transparent. In the third plate we have represented a state of disease to which such frequent allusion is made in M. Bayle's work on mental disorders, namely, inflammation of the pia mater and tunica arachnoides. The veins are represented as particularly turgid, but we are disposed to think that the arterial ramifications and anastomoses are more numerous in most examples in which the pia mater is inflamed than they appear in this plate. The fourth plate shews the base of the brain in the same affection, with numerous and considerable deposits of yellow albumen between the pia mater and the arachnoid tunic. The subject of the fifth plate is twofold ; the osseous formations occasionally found attached to the dura mater, and more rarely to the pia mater ; ' and also a very unusual occurrence, an abscess of the lateral sinuses of the dura mater.' This appearance, Dr. Hooper says, has not been noticed before. The plate exhibits two abscesses cut open, one in each lateral sinus. The pressure of that in the left, on the part of the temporal bone covered by it, ' namely, the groove for the lateral sinus, just above the foramen lacerum in basi cranii, caused a complete absorption of it ; a tumour pointed externally, and pus was evacuated through the meatus auditorius externus.' The different tumours to which the dura mater is liable are finely represented in the sixth and seventh plates. In the eighth we have a view of the appearances subsequent

to inflammation of the substance of the brain itself; and in the ninth the appearance of the different abscesses, common, encysted, or cellular, to which it is liable. A most characteristic representation of hæmatoma, or fungus hæmatodes, as it appears in the brain, occupies the tenth plate; and the eleventh exhibits a striking example of a tumour, the substance of which is cheesy, and apparently unorganised, occupying almost the whole of the left lobe of the cerebellum, and which occurred, in a scrofulous subject. The twelfth plate represents various tubercles of the brain, the white tubercle, the black, or melanosis, so fully spoken of in our last Number, the bony tubercle, and some diseases of the pineal gland and choroid plexus, all of which are most clearly delineated. In a note, the author informs us that the subject from which the drawing of the black tubercle or melanosis was taken, had the disease in almost every part of the body; and that in a woman who died at the age of fifty, the face appeared, at a little distance, as if marked with spots of ink.

‘ This species of tubercle appears, at first sight, as if it were merely a coagulum of dark venous blood: it is, however, an organised mass of a pulpy or gelatinous consistence, which can be easily broken down, when it looks like the pigmentum nigrum of the eye, or soft Indian ink. It is surrounded by a very thin delicate membrane. Its structure is cellular; it can easily be turned out of the brain, to which it adheres loosely, except at one point, where the vessels enter by which it is formed and nourished.’—P. 31.

The last-mentioned circumstance is very delicately shewn in fig. 3 of the plate. The thirteenth plate gives a view of the basis of the brain, with a large encysted tumour in the centre of the middle lobe of the right side, a portion having been cut away to let out its contents, ‘ which were a puriform albumen, of the consistence of cream.’ In the fourteenth plate are represented three large vesicles or encysted tumours in the right hemisphere of the brain, occupying the chief part of the anterior and middle lobes: blood-vessels are seen ramifying upon them: they had much the appearance of animal hydatids, of the presence of which within the cranium, Dr. Hooper has met with no example. The fifteenth plate exhibits the usual appearances which the brain presents when blood is extravasated from the spontaneous rupture of a vessel in its substance.

We shall not attempt to do more than thus give a sort of catalogue of the subjects of these fine engravings, which we can conscientiously say will not disappoint any lover of morbid anatomy. It may be considered hypercritical to say, that to us the value of works of this kind, however splendid and

faithful, is materially diminished by the absence of a brief account of the symptoms of the morbid lesions represented. With such an accompaniment, the engravings would convey in a very easy manner much valuable information, which would be easily retained: without it, we turn over the fine plates, not without interest certainly, because many of them represent the appearances of lesions of which the symptoms are familiar to us; but in many instances without advantage, being merely amused for a moment with a delineation of a disease, for a description of which we either know not where to look, or have to turn over the endless numbers of medical journals, or are referred to works to which the generality of medical readers cannot possibly have access. Those who cultivate any particular branch of medical science with somewhat exclusive attention, frequently require to be reminded, that the chief utility of any branch must depend on its connexion with the important object of all medical study, and should always bear upon the science of preserving health and curing disease.

V.

MATERIA INDICA.

Materia Indica; or some Account of those Articles which are employed by the Hindoos, and other Eastern Nations, in their Medicine, Arts, and Agriculture; comprising also Formulae, with Practical Observations, Names of Diseases in various Eastern Languages, and a copious List of Oriental Books immediately connected with general Science, &c. &c. By WHITELAW AINSLIE, M.D. &c. late of the Medical Staff of Southern India. 2 Vols. pp. 654, 604. 1826.

DR. AINSLIE informs us in his preface, that this may be considered as the second edition of a work which he published in India, in 1813, and the first edition of which has long ago been exhausted. The numerous applications that have been made for it, since it has been out of print, have induced him to republish it, with a new arrangement, and in an enlarged form. These circumstances are sufficiently indicative of its value, and that it is really held in high estimation by those who are most capable of appreciating its worth; to wit, medical practitioners resident in eastern countries. The remarks, therefore, that we are about to offer upon the work, can in no way be regarded as detracting from its value, but rather as proceeding from a wish, on our parts, to enable Dr. Ainslie to make it yet more extensively useful, by altering still further its arrangement, and rendering its contents more

readily attainable. Were there indeed no other reason than the extraordinary labour that has been expended upon these volumes, this alone would prevent our employing the language of censure; but in truth, laborious as the *Materia Indica* is, it contains very multifarious and very important information.

What may have been the size and extent of the first edition, having only seen the present English publication, we do not know; but we are somewhat inclined to believe that the increase of volume has not been at the same time an increase of value. The work in its present form consists of two octavo volumes, each containing upwards of six hundred pages. The first volume is divided into three chapters, the first of which is entitled 'Articles of the British *Materia Medica* found in India and other eastern countries,—their use among the native inhabitants, including also some articles of diet for the sick.'

This is particularly the chapter that appears to us, for the greatest part, entirely superfluous. It consists of notices of substances actually employed among ourselves, and respecting the general virtues of which the same opinions appear to be entertained in India as in Europe. There are, it is true, occasional deviations, such, however, as we have at various times had an opportunity of stating were prevalent among European physicians in the dark ages. The principal object, we apprehend, to have been kept in view in such a catalogue should have been the discrepancies or agreements of the different countries, and to have ascertained, if possible, their origin. We might thus have arrived at some physiological knowledge with which at present we are unacquainted, and might have learnt to estimate more accurately the effects of climate and peculiar habits upon the human constitution. As, however, this chapter is now arranged, it is little more than a catalogue, and the notes appended are, almost without exception, drawn from the observations of European authors made in European countries. It seems to us, also, that the information thus given is too scanty to supersede the necessity of the English dispensatories, even in India, and must serve therefore merely to swell the work, without supplying the place of another.

Another objection that strikes us in the execution of the *Materia Indica* is the alphabetical arrangement. This is only advisable when most of the substances and even their properties are tolerably well known, and when, therefore, a volume is consulted only for the detailed particulars of some individual article: but when it is desirable to give a general view of a whole subject, it is only possible to do so by placing the different facts under distinct heads, so that

we may obtain, at a single glance, a general view of the whole. Accordingly, it appears to us that we should have much more easily understood the contents of these volumes, had we found the different substances arranged as in Cullen's or Murray's *Materia Medica*. It is very true, that, from the compound properties of substances, and from their exhibiting different virtues according to the circumstances under which they are applied, such a method might necessitate some little repetition. This, however, might be confined entirely to the title, and references might direct to that part of the volume where the article itself had been fully described. From a neglect of this plan, very great confusion has crept into Dr. Ainslie's work, and we have substances of the most opposite kinds preceding and succeeding each other. Farther; we are not able to arrive at any general conclusions by this method without immense labour, and we had almost said without recomposing the whole work. If, for instance, we would know the substances that are used as emetics, purgatives, articles of diet, &c. we have to run through the whole twelve hundred pages before we can be certain that our catalogue is complete.

The habits of the Hindoos are perhaps more peculiar than those of any other nation with which we are acquainted. Their division into castes, their strong prejudices, the immense power exercised by their priesthood, have served to perpetuate a system of society which seems utterly incompatible with their advanced state of civilisation. One of the most extraordinary circumstances connected with this strange mixture of knowledge and ignorance is the complete prohibition of animal food among a very large portion of the population. We wished much to have ascertained from the book before us the consequences of this prohibition to the human frame, or at least what articles of diet were sought for as the best substitutes for animal aliment. We remember well being much struck with an observation (we think) in Captain Franklin's travels, on this subject, as connected with the extreme northern countries. The purport of the remark was the great plenty of the lichen *islandicus*, and the benevolence of nature in not only providing in so destitute a region so nutritive a substance, but in combining it with a bitter, the well-known property of which is to stimulate the digestive powers of the stomach, and other assimilating organs. That a provision different in kind, but directed to the same end, has place in tropical countries, is and has long been a matter of popular belief; and the abundant production of spices has been deemed in some manner as compensating for the greater consumption of

vegetable food. Dr. Ainslie's work, however, affords us no information on the subject; and if we except the following remark upon garlic, we know not where else to find any indication that dyspepsia is very common in India, or that the produce of that favoured land was at all calculated to prevent or to remedy it.

'I shall merely here state, before concluding, that in a climate like India, where dyspepsia is frequent, and perhaps rendered still more so amongst the natives by their living so much on vegetable diet, garlic, by supplying a gentle and grateful stimulus to the stomach, is highly useful.'

The defective arrangement now noticed, and the consequent inconveniences attending it, are the more surprising, that Dr. Ainslie has himself observed in his preface, that as 'a large proportion of the natives of India are prohibited by their religion from eating animal food, they have naturally been led to seek for a luxurious variety from another kingdom.'

Another circumstance in the execution of this work, which appears to us objectionable, and to increase the bulk of the volumes, without any correspondent utility, is the dissertation upon articles common to both the eastern and western hemispheres, where no difference of any importance is entertained regarding their properties or medicinal effects: for this reason it appears to us that the articles upon milk might have been omitted, not because there is not much rational remark upon this substance, but because there is nothing but with whichever tolerably well-educated physician must necessarily become acquainted in his early studies. We find indeed that the Hindoo doctors have had their reveries, and we suppose still have them, as frequently as their solemn and dignified brethren of the West; and they too can find their panaceas as sovereign as the lately much celebrated white mustard-seed. It is perhaps a common mistake for those who are conversant with a subject to miscalculate the degree of interest it may have for their less informed neighbours; but to us, and we suspect many others of our countrymen, the following illustrations of Hindoo medicine will be more alluring than any of the oft-quoted opinions from Heberden, Hooper, &c. respecting the qualities of milk. Nor is it alluring only, but profitable also, if we rightly consider it. It leads us to a larger acquaintance with the human mind; we see it under different circumstances, and in a different nation; we learn a more just estimate of our intellectual powers, and are enabled to appreciate more fully the masterly mind of such a man as Lord Bacon, who has taught us

a safer mode of philosophising, and secured us from mistaking the indulgences of the imagination for the discoveries of science.

‘ Much has been said of the different kinds of milk in many of the Sanscrit and Zamool medical sastrums, but by none is the subject so fully treated of as by Aghastier; in his celebrated work entitled *Vytia Amjouroo*. It would occupy too much room were I to enter at large into all his fanciful notions; suffice it here to observe, that he considers cow’s milk as proper food for the young, and, as is indicated in many cases, for the more advanced, who require light nourishment. He conceives it to be the most aperient of all milk, and, what is fanciful enough, that it tends to clear the intellect. The milk of a white cow, he says, is of use in hypochondriacal cases; that of a red one, for such as suffer from biliary derangements; that of a black one, particularly if it has also a dark-coloured udder, he thinks beneficial for those who are troubled with phlegm; and, last of all, that a cow which is of the colour of gold, yields milk that can cure all sorts of diseases! In fact, he can scarcely find words to praise sufficiently the milk of this favourite and revered animal. Much then, he proceeds to say, will depend upon the time when the milk is taken: if drank in the morning, it alleviates the pains of rheumatism; at noon, it gives appetite; but if taken at bed-time, it is good for every ailment of the body.’

From the little original matter, the result of his own experience, that Dr. Ainslie has given, we should have been glad to have had more from the same source. The observations of intelligent men, even in a long beaten track, are always valuable; but they are still more so when made in India, where, comparatively speaking, the harvest has scarcely been begun. The following passage respecting balsam of Peru deserves notice, if the opinion contained in it is correct; and under any circumstances it is worthy of investigation. It is rather oddly placed, however, under the article ‘storax.’

‘ The physicians on the continent of Europe consider storax as resembling the balsam of Peru in its nature, and think that it might be substituted for it. But this last-mentioned substance possesses virtues, when applied externally, in arresting the progress of phagedenic ulcers and mortifications, which are altogether peculiar to itself. Many are the lives I have saved by its use in India, by having fortunately discovered that it had the specific quality of putting an immediate check to sphacelous affections in cases in which every thing else had failed. I used it in this way: lint, drenched in the balsam, was applied morning and evening to the face of the sore for three days together: sometimes by the end of the second day the face of the sore was clean.’

We know not upon what authority Dr. Ainslie states the pine apple to be no unfrequent cause of cholera morbus. We

rather suspect that any substance, whether vegetable or animal, may in certain conditions of the *primæ viæ* produce this disease. We have ourselves experienced it after eating oysters; and the late Dr. Bateman considered vegetable diet as a preservative from bowel complaints. It is certain that in this country we do not see cholera during that part of the year in which fruit is most abundant, but towards the end of autumn, when the nights are damp and warm, and fruit is less generally eaten.

There are some articles in this first chapter respecting which Dr. Ainslie seems to have obtained very little information, or rather to have repeated only what was already known, where we might have expected the result of his own researches. Thus, in the article tea, we have quotations from almost every author that has ever written upon it,—but nothing that will enable us more positively to decide on the much contested origin of black and green tea. For this, however, the author compensates by his extravagant praise of its properties.

‘To the sedentary and literary, tea is certainly a great blessing, as it enlivens without heating; nay, I should almost be inclined to go a little farther, and partly ascribe to its prudent use something of that brilliancy of imagination and fineness of fancy which so peculiarly distinguish the poets and novel writers of our happy country, where so much is drank.’

It is truly unfortunate for this whimsical hypothesis that Shakspeare wrote, when, not thin potations, but sturdy ale and solid beef steak formed the daily breakfast; and that poor Sheridan generally recurred to sparkling wine as the stimulant to, and reward of, his most brilliant thoughts. To be sure, Dr. Ainslie has the support of a French writer, from whom he quotes one of those *morceaux* which the literati of that nation so pleasantly compose for the expression of little nothings:—‘*pris avec modération, il réveille l’esprit, lui donne une agitation douce, et plus d’un écrivain lui a dû un trait piquant, une pensée heureuse.*’

The observations upon the different properties of wine in India we have no doubt are drawn from considerable experience; and we shall insert a great part of them as a fair specimen of Dr. Ainslie’s method of treating his subject.

‘Wines are much drank by such European inhabitants in India as can afford them, and are certainly more conducive to health than arrack, which in former years was but too liberally indulged in. Those chiefly brought to table are Sherry, Madeira, Port, Claret, and Cape Madeira. The first has a degree of bitterness in it, and agrees better with delicate stomachs than Madeira, which is of all wines, in my opinion, the most liable to produce acidity in the first

tion of the commentary is the *Nidana St'hana*, or section on symptoms or diagnosis. The third is the *Sarira St'hana*, the subject of which is anatomy. The fourth, *Chikitsa St'hana*, treats of the internal use of medicines. The fifth; *Kalpa St'hana*, gives a copious list of antidotes. The sixth, and last, is the *Uttara*; it is a supplementary section on various local diseases, or affections of the eye, ear, &c. In all those portions, however, it would appear from the testimony last quoted, that surgery, and not general medicine, is the principal object of the commentary.

'The instrumental part of surgery, was according to the best authority, of eight kinds, *chedhana*, cutting or excision; *lekha*, which signifies drawing lines, appears to be applicable to scarification and inoculation; *vyadhana*, puncturing; *eshyam*, probing, or sounding; *aharya*, extraction of solid bodies; *visravana*, extraction of fluids; *sevana*, or sewing; and *bhedana*, division, or excision.'

To this extract we shall add another, which Dr. Ainslie tells us is taken 'from a translation of Aghastier Vytia Anyouroo, a medical sastro,' and which will serve as a specimen of Indian medical writing.

'*Signs of a Bilious and Irritable Habit.*—A person of what is called a bilious habit, generally becomes grey very early in life; he is easily made to perspire; his eyes are often inflamed, while his body is pale; he is impatient, perverse, opiniative, and consequential; and for the most part very amorous; the conversation of such an individual is unguarded; he is addicted to falsehood, fond of abstruse studies, yet he is more partial still to the praises that are bestowed on himself.

'*Causes of Fever.*—An exposure to the heat of the sun, at an early hour of the morning, while fasting; eating voraciously any food of a very hot nature, when the body has been previously weakened by extreme hunger or fatigue; drinking stagnated water, into which withered leaves have fallen; taking a full meal without appetite; unseasonable weather; sudden vicissitudes of temperature; wooded, ill-ventilated valleys; neglected adoration of Crishna; air we have not been accustomed to, whether that of the plains or mountains; the malign influence of an evil spirit or *dewta*; checked perspiration; fear; grief; sleepless nights; long-continued constipation; in a word, whatever exposes our mortal frame to deviations from its natural and accustomed movements! or clogs nature so much, that it requires great agitation, and consequent heat, to bring the body back to sound health.

'*What constitutes a good Physician?*—The sages of antiquity (*maharshies*) have thus handed down to us the qualities which constitute a good physician: he must be a person of strict veracity, and of the greatest sobriety and decorum, holding sexual intercourse with no woman except his own wife; he ought to be thoroughly skilled in all the commentaries on the *ayurveda*, and be otherwise a man of sense and benevolence; his heart must be charitable; his

temper calm ; and his constant study how to do good. Such an individual is properly called a good physician, and such a physician ought still daily to improve his mind by an attentive perusal of scientific books (vāghādum).

“ When a patient expresses himself peevishly or hastily, a *Vytian*, so endowed, will not thereby be provoked to impatience ; he remains mild, yet courageous, and cherishes a cheerful hope of being able to save the sufferer's life ; he is frank, communicative, impartial, and liberal,—yet ever rigid in exacting an adherence to whatever regimen or rules he may think it necessary to enjoin. Should death come upon us, under the care of this earthly saint, it can only be considered as inevitable fate, and not the consequence of presumptuous ignorance.”

We had almost forgotten to state one species of information which Dr. Ainslie has afforded, and which is of the most valuable kind ; viz. tables of weights and measures employed in Hindostan reduced to their correspondent value in English standard. To those who are just entering upon an Indian life such matter must be peculiarly serviceable.

In considering Dr. Ainslie's volumes generally, we can scarcely do more than repeat what we have already said. They present us with knowledge which we cannot obtain elsewhere. There are, it is true, many minor faults, and upon which, at one time, we had intended to remark ; but in proceeding with our perusal we found such continual reason for high satisfaction, that we should be ashamed of ourselves could we weigh the '*paucas maculas*' against the sterling value of the whole. The work must be one of frequent consultation to all medical residents in India.

V.

A Short Inquiry into the Practical Causes of the unsuccessful termination of Extraction by the Cornea ; with the view of shewing the superiority of Dr. Jäger's Double Knife over the Single Cataract-Knives of Wenzel and Beer. By CHARLES LOUDON, Member of the Royal College of Surgeons in London, &c. &c. &c. Pp. 14, with a Copper-Plate. 4to. London, 1826.

MR. LOUDON's title-page distinctly indicates the objects of his practical though unassuming inquiry ; and the manner in which he has executed the work affords a happy illustration of his learning and experience, and of the accuracy as well as extent of his observation in the best schools of Paris, Berlin, Vienna, and Italy. With much conciseness and precision of language, he distinguishes the successive steps by which the extraction should be performed ; defines the various

moral and physiological causes of the embarrassment which requires to be overcome by the operating surgeon; particularises the circumstances that almost necessarily lead to a failure of the operation, with practical rules for counteracting them; and last of all describes the new knife, with the method of using it with facility and success. An extract will illustrate the nature of his book, and the author's perfect acquaintance with his subject.

'We have already,' he remarks, p. 8, 'adverted to the action of the muscles on the coats of the eye, to the mechanical effects of the instrument, and to the consequent pressure on the vitreous and aqueous humours. One very curious phenomenon, which is the result of this pressure, is the protrusion of the iris from its natural state nearer to the concavity of the cornea. That the muscles are the remote cause of this effect there cannot be any doubt, although in what way is somewhat obscure. From the smallness of the posterior chamber it appeared to me, at first, that the elongation of the vitreous humours, from pressure on the coats, might act in protruding the iris; but I was afterwards induced to change my opinion, from the following considerations:—1st,—That the bulk of the humours is always the same; 2dly,—That the iris is more protruded near its pupillary than its sclerotic margin; 3dly,—The vitreous humour is too solid to admit of being pushed back by the slight friction on the cornea generally used, and could not be retained in its situation when the repelling agent was removed. That the posterior chamber contains enough of fluid to permit the iris to resume its natural situation is at once evident, from this membrane assuming its usual place. It must be confessed that this change of situation is rather difficult to explain, as any pressure from behind would act equally on every part of the aqueous fluid, both in the anterior and posterior cavities. That it does take place is well known; and if, during the time that the incision of the cornea is making, the iris should be brought into this state, care must be taken not to push the knife nearer the internal angle of the eye until the iris resumes its natural state. Wenzel was the first, I believe, who pointed out the proper treatment to be adopted: it consists of gentle pressure and friction on the cornea with one of the fingers of the hand that keeps down the lower eye-lid, until the iris goes back and is completely out of danger. In the case where the iris prolapses from the escape of the humour into the anterior chamber, the knife must be withdrawn and the operation delayed, or finished with Daviel's scissors.'

Mr. Loudon's graphic representation of the new instrument is distinct and accurate: the inquiry altogether combines much knowledge and judgment; and we look upon it as a certain pledge of more important contributions by the author, to the great improvement of ophthalmic surgery.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ORIGINAL PAPERS.

1. Observations on the Expediency of addressing Religious Instruction publicly to the Insane: extracted chiefly from the Annual Reports of the Glasgow Royal Asylum for Lunatics.

‘Opinionum commenta delict dies, naturæ experientiaque judicia confirmat.’

INSANITY constitutes a subject having essential relations with the philosophy of medicine, medical jurisprudence, and theology; and consequently presents many important questions to the consideration of every one who finds duty or philanthropy in promoting such applications of these sciences as contribute, in any degree, to the cure or comfort of persons suffering the affliction of mental derangement. Among other questions of this kind is that which goes to determine the expediency of admitting lunatics to join in the public services of religion. In September last, an ‘opinion,’ expressed with much judgment and duly qualified, was submitted to the superintending magistrates by the medical officers of the Lancashire Lunatic Asylum, on the ‘Application of Religious Worship to the Patients in that establishment.’ The object of the present communication is to furnish additional testimony to the propriety of this practice; and to shew that it has been successfully adopted for many years in one of the largest and best-conducted institutions for the management of insane persons.

In the Royal Asylum* for lunatics at Glasgow, for eight years nearly, sermons have been regularly addressed to audiences of the inmates selected, by the physicians and chaplain, as qualified to hear public religious instruction,—many of them with judgment, and all with attention. In the annual reports of this institution frequent recurrence is made to the subject; and from these the following extracts have been taken: they communicate the results of judicious and philosophical observation sustained uninterruptedly for a long period of time, on a very large scale, and upon a great

* This excellent institution was founded in 1810, and in 1814 received the first forty patients. In every succeeding year the reports of its directors have exhibited indisputable proofs of its extensive and extending usefulness. Twelve of these have been published, and constitute authority for the statements in the text. A comprehensive account of the moral and medical economy of this asylum will be found in the *Medico-Chirurgical Review* for March 1824, p. 775.

diversity of characters, and conducted by intelligent persons, solicitous of arriving at practical truth, exclusively of all other ends.

Early in 1819, and in compliance with the wishes of many of the patients, a sermon was preached in the Glasgow Asylum according to the forms of divine service regularly used in the Scottish churches; and, till the appointment of a chaplain to the institution, the same service continued to be performed on the evening of every third or fourth Sunday from that time. About fifty of the patients usually attended, and *invariably behaved with the greatest decorum*. At the close of the first of these interesting meetings, one of the boarders, a person of superior rank, respectfully approached the clergyman, and gratefully thanked him 'for his kind condescension in preaching to the unfortunate inmates of the Asylum,' adding, that 'he himself felt peculiarly gratified that now he was thought worthy to attend public worship.' Having mentioned these remarkable facts, the directors, in their report for 1819, p. 18, subjoin the following observations:—

'Those who are accustomed to view religion as a frequent cause of insanity might be apprehensive of injurious effects from the preaching of a sermon to lunatics; and there are some insane persons whose minds might be too powerfully agitated if they were permitted to attend public worship. But it is doubtful if there be at present in the Asylum a single case which can fairly be imputed to religion. Some of the patients who exhibit the strongest religious impressions gave evident tokens of insanity, as appears by their history, before these impressions were remarkable. In truth, religious melancholy is oftener the consequence than the cause of insanity. The mind, weakened by its malady, becomes morbidly affected by every impression; and is it surprising, that religious impressions should sometimes be found among those which operate too strongly for the bewildered faculties? But whatever opinion may be entertained of the probable effect of these sermons, there can be no doubt, that, merely to arrest the attention of the insane has often no small influence in restoring reason. In a person at large, and receiving highly-varied and strong impressions almost every moment of his waking hours, the service of the Sabbath may not excite very strong interest, when compared with many of the daily occurrences. But to one who is shut up from the world, and with whom every day is alike, the breaking upon the ordinary routine by a set of observances at once singular and solemn, cannot fail to make a deep impression, and to fix attention in a high degree. Accordingly, the fact is, that during all the sermons which have hitherto been preached, the most loquacious have remained silent, the restless have become composed, and all have kept their eyes steadily fixed upon the clergyman, as if anxious to hear and to appreciate every word of his discourse. Besides, on that day, when the maniac is debarred from his usual sports and employments, with no resource but in the society of beings like himself, he is too apt to lounge away the hours in listless apathy, brooding over his own vain imaginations, or perhaps to give a loose to the mischievous

propensities engendered by his distorted conceptions. Any employment tending thus to break in upon uniformity, and innocently to occupy idle time, would be useful. But how much more benefit may we not expect to accrue from an employment which is naturally soothing and consolatory? Independently of the sermon itself, and *it is always most judiciously suited to the occasion*, the assembling together for one purpose, and that purpose of the most solemn kind—the tendency which worship has to carry the mind back to earlier and more happy times—the uniting of voices in sacred melody, rendered interesting by various associations, are all calculated to throw a gleam of peace over the most perturbed spirits; and who knows, but by striking upon those chords of feeling which vibrated in happier days, some long-lost train of recollection may rush over the soul, sweeping away these phantoms of lunacy which often veil the past from the present man, and blend with every ray of hope the gloom of despondency?

After another year's experience, the directors revert to the same subject, and express their sentiments with increasing confidence, in these terms:—

‘As one of our means,’ (Report VII. p. 11) of moral and also of mental management, divine service may be mentioned. An intelligent author (Dr. Burrows), who bestows high encomiums on our Asylum, is of opinion that religious consolation imparted privately would be preferable to public worship; and it may be so in particular cases, and especially if the service were performed agreeably to some established modes. For example, were it performed according to the mode of the church of England, where each individual repeats and responds at certain parts of the service, it might perhaps lead to an unbridled license of the tongue, which would indeed, as that author says, be a mockery of religion. But the form of worship according to the church of Scotland is not liable to the same objection; and as to preaching to *unselected* auditors on topics calculated to excite strong emotions, or to foster gloomy impressions, we admit that it would be highly injudicious. Yet, with due respect for the opinion of the author, we cannot approve of the mode which he prefers. We greatly fear that if a religious monitor were to enter the wards of an asylum he would unavoidably be assailed by patients with whom it was not intended that he should hold any communication, and that even those persons to whom his attention might be expressly directed would be injuriously chagrined or irritated, unless they were indulged in expatiating on the very subjects on which their minds were already too prone to dwell. *But all speculative opinion must yield to the evidence of facts derived from actual experience. Sermons have been preached in our Asylum, to numerous and most attentive audiences, for nearly two years, and have not yet been observed to produce any injurious effects on the mind of any one of the hearers.* Some of the patients, it is true, may have listened to these sermons without having been much edified, but all of them have been gratified, and many of them soothed and consoled.’

Resuming a consideration of the same question, the directors, in their report for the following year, 1821, p. 24, 'return their grateful thanks to the clergymen who officiated,' and proceed to make these remarks:—

'The experience of all those clergymen who have hitherto preached must have convinced them that the patients *selected to be their auditors* were capable of listening attentively, and of behaving in the most quiet and orderly manner. Yet some persons still doubt the propriety of preaching in the Asylum. If, indeed, *all the patients were, at all times and on every subject* insane, from the time when they were admitted until the instant of their dismissal, the attempt to impart to them religious instruction or consolation might prove fruitless, if not injurious. But *some patients are insane only on certain points*, while on *many subjects* they are rational; some are insane only at certain times, but enjoy long intervals of reason; some are in a state of convalescence from insanity, and although not possessed of sufficient firmness of mind, nor so free from occasional aberration as to render it expedient for them to resume their former occupations, or even to mingle with the world, yet are perfectly capable of deriving benefit from moral and religious instruction; and, lastly, some are *not lunatics* in any degree, but completely cured of that lunacy for which they were admitted; yet, according to our rules, they are obliged to remain in the Asylum for two months, or in some cases of periodical madness for a longer period, as the necessary term of their probation. The illusions of the insane, no doubt, are sometimes derived from religious impressions, and then great discretion is requisite in regard to religious exercises; *but we do not find among our patients that religion is a frequent cause of lunacy*; and many of our convalescents or probationers, whose malady had not any connexion with religion, are much disposed to attend to religious duties, and to cherish those impressions which they received in their early years from a religious education. Such patients, before the practice of preaching in the Asylum was introduced, often *complained bitterly* that they were precluded from attending divine service; and sometimes, *at their own earnest entreaties, they were indulged with liberty to go to church, under the charge of a proper attendant*. This indulgence was, for obvious reasons, objectionable. But, surely, it would be hard to withhold from such patients the gratification of that public worship through which our excellent clergymen now humanely impart to them useful admonition and consolation.'

By visitors of all kinds, British and foreign, the moral management of the patients in this Asylum has, on all occasions, been highly estimated and admired. In his official Report for 1822, the Sheriff of the County alludes to it in terms of great but discriminating approbation. In the subjoined extract he states,

'That he had, during the last year, twice officially visited the Asylum, and that it afforded him much satisfaction in having it in his power to report that the system of treatment observed in this institution appears, in an eminent degree, to combine every possible

attention to the mental solace and bodily comfort of the patients, and which can aid the prospect or even the hope of future recovery. The sheriff has particularly observed, as a proof of the uniform kindness, discrimination, and skill with which the patients of all ranks are treated, that there is, in this Asylum, a greater proportion of tranquillity and contentment, and less of that perturbation and violent irritation, than is perhaps to be found in other institutions of a similar description.'

Early in 1823, the directors elected a permanent chaplain, by whom, as in former years by the neighbouring clergy, divine service has ever since been regularly performed in the Asylum once a fortnight. Having stated the circumstances of this appointment in their *Tenth Annual Report*, p. 22, the directors give their further experience of the system of preaching to the insane:—

'The patients who are *selected* to attend sermon,' they observe, 'are usually about seventy in number, and either are convalescent or have manifested a remission of their malady. Liberty to attend is at first granted as a test of improvement, and always as a favour. At sermon, as we have formerly had occasion to report, our patients behave with great decorum; and several of them, who are still under some degree of excitation, appear to derive benefit from the restraint which they impose on themselves during divine service. The chaplain is well qualified for his office by his mild, calm, and affectionate manner of preaching. The sermons always command attention, and have generally been historical, as sermons of this description seem to be particularly interesting to the audience. He carefully avoids, in these sermons, controversial discussion on any topic which might tend to bewilder or unduly to excite: thus, without compromising the essential duty of a pastor, he gives not "strong meat to babes." Indeed, our patients are, in many respects, as children; and those to whose care or tuition they are in any shape intrusted, cannot avoid entertaining something like a parental feeling towards them. This feeling our chaplain has often evinced, both in the course of his stated duties, and when called upon, as he has sometimes been, to visit a single patient. Great care, of course, is always taken to guard against whatever might tend to foster predominant illusions. But we have now for several years had experience of the practice of preaching in the Asylum; and, far from attempting to determine the precise degrees of the powers of attention, recollection, and judgment, which are necessary to qualify human beings for joining in public worship, we are rather disposed to allow full weight to the sentiment conveyed in the following extract from an interesting letter addressed to the chaplain by one of our patients:—"We know of no law whereby the prayers, entreaties, tears, and sorrows, even of lunatics, are debarred from the throne above."'

Eight years' close observation of its effects on the insane *selected* to hear it, seems to have produced, in the minds of the directors of the Glasgow Asylum, an entire conviction of the duty and expediency of admitting lunatics, under proper rules, to the enjoyment of

religious instruction publicly communicated: for, in January 1826, Report XII. p. 21, we find them stating,

‘That, besides preaching every alternate Sunday, with his known ability, and with entire satisfaction to his audience, the chaplain^a has repeatedly been called upon to administer comfort to sick or dying patients. In the performance of these duties it will be obvious that no small share of delicacy and discretion is often required; and in regard to the qualifications of our chaplain we have great pleasure in bearing the most favourable testimony. The sermons are as numerous attended as formerly, and *our farther experience still more confirms us in our opinion of the expediency of preaching in the Asylum.*’

These extracts, then, represent the progress of a fair practical experiment conducted by experienced and vigilant observers; and by the results of this it is made evident, that the method of administering public religious instruction to insane persons, under the rules and precautions adopted in the Royal Asylum for lunatics at Glasgow, is both expedient and beneficial; and that the accordance of opinion on this question, expressed in nearly identical and equally explicit terms by the medical officers of the Lancashire Lunatic Asylum† in September last, affords an additional and satisfactory testimony to the accuracy of the conclusion, and to the applicability of the practice.

PHILOCLYDAS.

December. 1826.

SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. *Of the Use of the Polygala Senega in several Species of Ophthalmia.*

‘THE polygala senega has frequently been employed in Germany in the treatment of cases of ophthalmia. Its effects are stated by Dr. Ammon to be very marked in all inflammations of the membranes of the eye which threaten to end in, or which have already produced, some morbid secretion. Its action is either curative or prophylactic; it either prevents an impending diseased secretion,

* There is something exceedingly delightful in finding such a record of official approbation, expressing the deserts of active virtue. The gentleman thus applauded by the directors is eminently qualified for the delicate and important duties of his office, by his humanity and firmness, his acquirements in literature and the sciences, and especially by his knowledge of the original distinctions of our nature, and the true philosophy of mind.

† It would conduce much to the improvement of all establishments of this kind in the empire, if such arrangements were entered into by the directors of these institutions as would ensure a regular interchange of their annual reports.

or arrests its progress. It is indicated in all the cases of ophthalmia which readily assume the character of chemosis, or which produce suppuration of the sclerotic and of the cornea; and even in those which, affecting the deeper-seated membranes of the globe of the eye, may produce suppurations yet more dangerous. Of this kind are simple rheumatic ophthalmia, rheumatic catarrhal ophthalmia, erysipelas of the eye, gouty ophthalmia, iritis with its different divisions and subdivisions, &c.

'CASE I.—A woman, aged forty-two, for many years affected with syphilis incompletely cured, but who had been relieved from severe arthritic pains produced by that disease. She was attacked in October 1825, with rheumatic catarrhal inflammation of the right eye. The conjunctiva and the sclerotic were very red, the upper eye-lid much tumefied, and it seemed to the patient as if the globe had become so large as to be ready to escape from the orbit: the cornea was obscured by some vascular productions, and violent pain, proceeding from the interior of the eye, extended over the whole of the right half of the face, and into the occipital region, and caused the patient to scream out. (*General bleeding; leeches round the orbit; cold poultices to the eye; calomel*). After four grains of calomel were given, an abundant salivation rendered it necessary to abandon its employment. The treatment was now limited to refrigerant remedies. The symptoms became aggravated; the colour of the iris underwent a change, and pus was discerned between the lamina of the ulcerated cornea. *R Pulv. rad. senegæ, ʒij.; saponis medic. ʒj.; M. Ft. pil. gr. iij.; consperguntur sem. lycopod.* Ten pills were ordered to be taken in a day. No topical means were employed. At the end of three days the ulcerations were circumscribed, and the purulent collections and vascularity of the cornea diminished. After the use of ʒij. and some drachms of the polygala, the eye was in its natural state, and the sight pretty well restored. A little remaining difficulty in directing the eye was removed by some local applications. The patient reads small writing very well, and pursues her occupations without inconvenience.

'This patient had two relapses, less severe however than the first attack, from both of which she was recovered by the use of the polygala. Her health is at present good, and she has no pain in her eyes.'

'CASE II.—A young woman received a blow on her left eye, in December 1825: it was immediately followed by very active inflammation, which, notwithstanding the application of leeches round the orbit, a blister behind the neck, and derivatives to the intestinal canal, degenerated into hypopion. Half of the interior chamber was filled with pus. *R Pulv. rad. senegæ, ʒij.; sapon. med. ʒj. M. Ft. cam sp. vini, q. s., massa pilularum, ex quâ form. pilul. gr. iij. Consperg. pulv. cinnamoni.* Ten pills to be taken night and morning. Rapid diminution of the hypopion, which completely disappeared at the end of eight days. For some time

there remained chronic inflammation of the iris, and of the ciliary processes, with a painful sensibility of the eye to light. The polygala was continued, and some local applications employed to complete the cure. She is now quite well.

'CASE III.—A cachectic woman, aged thirty-four, was suddenly affected with iritis, some time after undergoing an operation for cataract. Neither antiphlogistics, calomel, nor belladonna, could prevent the formation of hypopion in the anterior chamber. Recourse was had to the polygala, which dissipated the hypopion, and more than once, for there were several relapses. The patient took, in all, an ounce and a half of polygala.

'CASE IV.—A young woman of eighteen. Numerous relapses of scrofulous ophthalmia, cured in a very short time by means of the powder of polygala, ʒij. ; root of jalap, ʒj. ; magnesia, ʒij.

'CASE V.—Scrophulous ophthalmia in a little girl. The treatment was commenced with calomel. Afterwards the following was prescribed:—℞ *Rad. senegæ*, ʒij. ; *coque cum aq. fontanæ*, ʒx. ; *colaturæ*, ʒvj. *Add. ext. liq.* ʒij. A tea-spoonful every two hours. Three mixtures of this kind sufficed completely to dissipate hypopion, already formed between the laminæ of the cornea.

'CASE VI.—Cure of two pterygia in a woman of seventy-five, obtained at the end of a month by the internal use of polygala.

'The root of the polygala senega may be given in decoction, or in powder: it is most efficacious in the latter form: a proportionate quantity of soap is commonly added to make it less disagreeable to the patient, or some other substance, according to circumstances.'—(*Arch. Gén. from Heidelberger Klinische Annalen.*)

II. Dr. Physick's Operation for Artificial Anus.

'JOHN EXILIUS, a Swedish sailor, aged nineteen years, was admitted into the Pennsylvania Hospital on the morning of the 20th of October, 1808, affected with a congenital hernia. He stated that he had passed the last fourteen days without having had a stool, and that on the 19th he had been affected with stercoraceous vomitings. These were renewed after his admission.

'After several other means had been employed to produce a reduction of the hernia, the operation was proceeded to at half past three o'clock the same afternoon, by the late professor Wistar, in the presence of Dr. Physick.

'The sac being opened, the intestines were found firmly adherent to the testicle, and partially so, but with equal firmness, to the abdominal ring, so as to account for the impossibility of effecting a reduction by the taxis. They appeared to be a part of the ileum. A perforation existed in the side of one of them of sufficient magnitude to permit the discharge of a considerable amount of fæces. There were, however, no marks of mortification found; and the opening appeared to be the product of mere ulceration.'

'The patient continued to suffer much from stercoraceous vomitings till the 23d, when he was relieved by purging. On the 24th,

Dr. Wistar divided a portion of the tendon of the transversalis abdominis and the neck of the sac, but with no other result than that of affording a freer passage to the fæces.

‘ On the 30th of October, the patient, by the regulations of the hospital, came under the care of Dr. Physick.

‘ On the 24th of December, the projecting portion of intestine was cut off close to the ring. This was done under the expectation that the open orifices thus left in the intestine would gradually be retracted within the abdomen. On applying a ligature to a divided mesenteric artery, severe pain was produced in that cavity, which was relieved by rhubarb, laudanum, and anise seed. After waiting some time, and finding that the retraction did not take place, as hoped for, another process was resorted to. A roll of waxed linen, such as is used in making bougies, and of the size of the fore-finger, was bent double, and each end introduced into one of the orifices of the intestine. The dresser then pressed the angular part of this tent backwards, in such a manner as to approximate the adherent intestine to a straight position. So much pain, of a kind similar to colic, was produced by this pressure, that the plan was necessarily abandoned. The two ends of the intestine were found, by a careful examination, to adhere to each other for some distance; and the form thus presented has been compared, in this case, to that of a double barrelled gun.

‘ The next method proposed by Dr. Physick, was to cut a lateral opening through the sides of the intestine, where they were adherent. But not knowing the extent of the adhesion inwards, he thought it necessary to adopt some preliminary measure for ensuring its existence to such a depth as might admit of the contemplated lateral opening, without penetrating the cavity of the peritoneum. By introducing his finger into the intestine through one orifice, and his thumb through the other, he was enabled to satisfy himself that nothing intervened between them, but the sides of the bowel. He was thus enabled, without risk, to pass a needle armed with a ligature from one portion of the intestine into the other, through the sides which were in contact, about an inch within the orifices, which ligature was then secured with a slip-knot.

‘ This operation was performed on the 28th of January, 1809. The ligature was merely drawn sufficiently tight to ensure the contact of those parts of the peritoneal tunic which were within the noose. When drawn tighter, it produced so much pain in the upper part of the abdomen, of a kind resembling colic, that it became necessary immediately to loosen it. The ligature, in this situation, gradually made its way by ulceration through the parts which it embraced, and thus loosened itself. It was at several periods again drawn to its original tightness.

‘ After about three weeks had elapsed, concluding that the required union between the two folds of peritoneum was sufficiently ensured, Dr. Physick divided with a bistoury all the parts which now remained included within the noose of the ligature. No unfavourable symptom occurred in consequence.

' On the 28th of February, the patient complained of an uneasy sensation in the lower part of the abdomen; and, on the 1st of March, he extracted with his own fingers some portions of hardened fæces from his rectum. On the 2d of March, two or three evacuations were produced in this manner. On the 3d, an enema, consisting of a solution of common salt, was directed to be given twice every day. The first of these occasioned a natural stool, about two hours after its administration. The same effect was produced on the 4th, 5th, and 6th; and the discharges from the orifice in the groin now became inconsiderable. Adhesive plasters, aided by compresses, were employed, not only to prevent the discharge of fæces from the artificial opening, but with the additional object of procuring the adhesion of its sides. This last effort was unsuccessful.

' On the 24th of June, an attempt was made to unite them by the twisted suture. Pins were left in for three days, and adhesion was, in fact, effected; but, owing to the induration of the adjacent parts, the wound again opened.

' On the 27th of July, a truss, of the common construction, furnished with a very large pad, and surmounted by a large compress, was applied to the wound. By these means, the discharge of fæces from the groin was completely prevented, and the patient had regular evacuations per anum; except when, from improper diet or cold, he became affected with diarrhoea. At such times, a small portion of the more fluid matter escaped by the sides of the compress.

' Not satisfied with this state of things, Dr. Physick made several attempts to improve the patient's condition. On the 2d of August, a mould of the parts was taken in plaster of Paris; and, being covered with buckskin, was employed as a pad for the truss. This expedient answered extremely well as long as the patient continued in the same posture in which the mould was made; but as soon as the form of the parts was altered by a change of position, fæces escaped from the orifice. A bandage was then applied to the body, furnished with a thick compress, and having that part of it which crossed the patient's back formed of elastic, extensible, wire springs, such as are used in suspenders. This also, however, proved ineffectual. The truss, with a compress and a large pad, stuffed in the common way, was then re-applied, and found to answer completely the purpose of preventing the discharge of fæces; the hope of an entire closure of the orifice being abandoned.

' On the 10th of November, he was discharged from the hospital, in good health and spirits, and applied himself, with very good success, to acquire the profession of an engraver.'—(*North American Medical and Surgical Journal.*)

III. *Phenomena of Drowning.*

THE question has been much discussed by writers on medical jurisprudence, whether fluids can enter into the stomach or lungs of an

animal, if not immersed till life is clearly extinct. All the facts hitherto brought forward have seemed to prove that this is impossible, so far as regards the stomach; and with the exception of an experiment which we shall insert below, water has never been ascertained to have entered the lungs under such circumstances. Fodéré, after giving every reason against the possibility, concludes with an expression of unwillingness to pronounce it utterly impossible, either as respects the stomach or the lungs. Our own conviction is, that fluid certainly cannot enter the former organ; of the latter, we were not quite so secure; and the experiment 16 gives additional support to our opinion. The truth is, that the lungs and stomach are very differently circumstanced as respects their communication with the fauces. The passage to the stomach is a closed muscular tube; the canal to the lungs, on the other hand, is always open, with the exception perhaps of the slight obstruction afforded by the glottis. The following experiments are contained in an *Essay on Drowning*, by Edward Jenner Cox, M.D., in the *North American Medical and Surgical Journal* for October 1826, which we have selected from a greater number, as bearing more particularly upon the subject we have adverted to.

Experiment 10.—A half-grown cat was drowned in the above solution. Although it did not once get its head to the surface, between four and five minutes elapsed before all signs of life were extinct, when it was immediately taken out. The thorax being opened, the lungs were seen enormously distended, of a very dark colour, arising from the quantity of blood in the small vessels. In several places in both lungs, particularly the lower lobes, we observed a very dark colour, which appeared to proceed from some of the ink contained within: being cut open, they were found full of the ink, and our supposition about the minute grains was realised, for on passing the scalpel over the cut surface, it was covered with them, which afforded a proof so conclusive that the most sceptical person would have been compelled to abandon his opinion to the evidence of his organs of sight and touch. The trachea was, when opened, found covered over with the same black grains; the stomach presented a black colour externally, and was full of the ink.

Experiment 11.—A half-grown cat was immersed in the same solution, and between six and seven minutes elapsed before respiration had entirely ceased, when it was taken out, and the thorax opened. The lungs were as much distended as possible; and with the exception of two spots, presented a black appearance, caused by the ink, which escaped in great abundance when those organs were cut open. On the internal surface of the trachea were found a great number of the small grains which were also discovered in the lungs. The stomach was full of the solution. The lungs of this cat were shewn to several physicians, who were perfectly convinced of the presence of the ink and the small grains in the lungs.

Experiment 12.—A half-grown cat was plunged into the ink, and there allowed to remain two minutes; when it was taken out, the respi-

ration being weak, I waited until it was perfectly re-established, and then tied a chord around its neck ; when dead, I opened the thorax, and found that not a drop of the ink had entered the lungs or trachea, they being in every respect of a natural colour.

‘ *Experiment 13.*—A cat was treated in precisely the same manner as the above, with similar results. In the stomach of each was found about two ounces of the fluid.

‘ *Experiment 14.*—A large cat was killed by tying a cord around its neck : three minutes after death, the cat was immersed in the ink, where it remained seven minutes. The trachea and lungs were found upon examination not to contain one drop of the fluid. The stomach was not examined.

‘ *Experiment 15.*—I tied the trachea of a cat, and when dead, the ligature being removed, it was immersed in the ink, where it remained fourteen minutes. The trachea, lungs, and stomach, were examined, and not a drop of the ink found in either of them.

‘ *Experiment 16.*—I tied a cord around the neck of a cat, and five minutes after death it was immersed in the ink. To keep the mouth open, I placed a small nail between the jaws, and in order to have the head higher than the rest of the body, pressure was made upon the lower part of the abdomen with a stick, by which means a quantity of air and mucus was forced from the lungs, and escaped by the mouth. After the cat had remained twenty minutes in the ink, it was taken out, and the lungs and stomach examined. The lungs contained a considerable quantity of the ink, and were very much engorged with blood ; the stomach contained none of the fluid. As in several of the preceding experiments, one of which was performed in precisely the same manner as this, not a drop of fluid was found in the lungs, we must conclude that the pressure made upon the abdomen, and indirectly upon the lungs, thereby forcing out the air and mucus from those organs, at the same time allowed the fluid to enter into their air cells. It is not impossible that the mouth, being kept open by the nail, might have contributed to the entrance of the fluid.

‘ *Experiment 17.*—A cord was tied around the neck of a cat, and five minutes after death it was immersed in the ink, where it remained twelve minutes. The lungs and stomach on examination were found not to contain one drop of the fluid. The lungs in this case were collapsed, containing very little mucus, and much less blood than had been generally observed in the preceding experiments.

‘ *Experiment 18.*—Another cat was treated in precisely the same manner, and with similar results. The lungs contained much more blood and mucus than in the last case.

‘ *Experiment 19.*—A cord was tied around the neck of a full-grown cat, and when the respiration appeared to be almost stopped, the cord was taken off ; the cat, breathing irregularly and weakly, was now put into the ink, where it remained until all signs of life were extinct, which took place in a short time. On dissection, the lungs and stomach were distended with the solution.

‘ From the above experiments, the following conclusions are drawn:—

‘ 1st. When an animal is immersed in any fluid, and taken out previous to the last efforts of respiration, none of the fluid will have entered the lungs, while in the stomach will be found one or two ounces.

‘ 2d. When water is found in the lungs of an animal that has been immersed, it is absolutely necessary that the animal be under water when making its last efforts to breathe. By referring to the extract from Paris and Fonblanque on Medical Jurisprudence, it will be seen that previous to the cessation of the circulation of the blood ineffectual efforts are made to breathe, in consequence of the muscles of respiration resuming their actions, which, in my opinion, is the precise time that the water enters the lungs.

‘ 3d. When an animal is killed, and then immersed for twelve or fourteen minutes, the lungs and stomach will not contain any of the fluid, unless, as in experiment 17, pressure be made upon the abdomen, which, by forcing out the air and mucus from the lungs, the fluid at the same time enters those organs.

‘ Since writing the above, I tied a cord around the neck of a cat, and seven minutes after death, I immersed it in the same solution, where it remained four hours. On examining the lungs and stomach, not a drop of the ink was observed in either organ.’

IV. *Case of Recovery from Drowning.*

From the same essay, we extract the following instance of resuscitation. Dr. Coxe had not, at the time it happened, ‘ regularly commenced the study of medicine.’

‘ A black child, aged eighteen months, accidentally fell into a cistern containing water eight feet deep, where it remained upwards of five minutes before we succeeded in dragging it out by means of a hook fastened to a long pole. When we had got the child out,* the first thing done was to strip off all its clothes as quickly as possible. The sun being very powerful, the child was exposed to its rays in preference to taking it into a warm room. The mother, “ the only person for some time present to assist me,” was ordered to rub as violently as possible over the whole body, while I looked over the article “ *Drowning*,” in the Encyclopædia, which fortunately happened to be in the house, and from which I collected all the information which I was so suddenly called upon to put in practice. The frictions with cayenne pepper and mustard were continued as vigorously as possible, and principally by myself, as the mother was more inclined to let things take their natural course than exert herself as I had ordered. A bucket of boiling water was next procured, and in it I placed the child, almost to the umbilicus, continuing the frictions at the same time. I now endeavoured to restore the respiration, by making one of the persons present (several

* The body was cold, the stomach much swollen, and no pulsation could be felt in any part of the system.

had by this time arrived) blow into one of the nostrils, while I closed the mouth and the other nostril. Not satisfied with the frictions and boiling water combined, I ordered some hot ashes from the kitchen fire, which were sprinkled over the whole body, and in several places the skin was rubbed off, but this did not prevent the renewal of the boiling water and frictions. This severe treatment may be considered unnecessary by some, but it must be recollected that I was treading upon new ground; and so important do I consider this part of the treatment, that were I called upon again, I would pursue precisely the same apparently severe remedy. Several cigars were broken up on a plate, live coals added, and the smoke held under the mouth and nostrils, and from time to time these parts were opened, and the smoke blown into them.

‘These four remedies,—frictions, heat applied to the surface with a view to restore the excitability of the system, blowing into the lungs, and applying tobacco smoke to the inside of the mouth and nostrils,—were unceasingly persevered in for one hour and a quarter before I had the satisfaction to perceive the slightest sign of returning animation; about this time, a faint gurgling noise was heard in the throat, caused by an imperfect attempt to inspire. A few minutes elapsed before it was repeated, but our exertions were redoubled, and we again heard the joyful sound, which from this moment continued to increase until the child cried out, and respiration was perfectly re-established. Placing my hand upon the region of the heart, I distinguished the faint pulsations of that organ, which continued to increase, and, in a short time, I felt the pulsation of the radial artery. The child being now able to swallow, I gave, at short intervals, a small quantity of hot wine and water, and brandy and water. Three hours after commencing my exertions to resuscitate this child, I had him put to bed, having previously given him some warm soup. He slept well that night, and was the next day as well as ever.’—(*North Amer. Med. & Surg. Journ.*)

It must be confessed that the result of this case was extremely satisfactory: there is, however, one part of the treatment of the propriety of which we are not convinced, and which is in direct opposition to the other remedies; we mean the employment of tobacco-smoke, one of the most powerful sedatives with which we are acquainted. Fodéré, indeed, advises it, among other remedies, but does not explain, particularly, its action. He seems, however, to regard it as a stimulant. The following extract from Mr. Brande’s *Manual of Pharmacy* clearly proves the contrary, for of the facts alleged no doubt can be entertained.

‘Tobacco is an eminently powerful sedative, when administered internally in the form of infusion, . . . and the fainting fits which it occasionally produces are of a dangerous and alarming nature. . . . Sometimes an injection of the smoke of tobacco is used as a substitute for the infusion, being more penetrating, and equally powerfully sedative.’

From Mr. Brodie’s experiments, infusion of tobacco appears to occasion death by acting on the heart and producing fainting,

through the medium of the nervous system. It appears from some of his researches, that the action of the heart ceases even before that of the diaphragm.—EDITORS.

V. Extracts from the Report of Diseases observed in the Hôtel Dieu in the Clinical Wards of M. Recamier.

‘Among these diseases there is an instance of gangrene of the lungs reported. We give it in the words of the reporter.

‘The patient in whom this state of the lungs was discovered entered the Hôtel Dieu extremely debilitated, and appeared as if he had long suffered from a severe chronic disease. There was no manifest local affection. The debility increased: respiration, when examined by the stethoscope, was feeble but perfect,—the right side was less sonorous than the left; there was no expectoration; the pulse was very weak; the bowels constipated. The next day the face was hippocratic, the extremities cold (a symptom that continued for three days), and the pulse insensible. Intelligence, however, remained, and he shewed his tongue when required, which was pale and rather moist; but his voice was so weak that he could only be heard by applying the ear close to his mouth. On the fourth day from his admission he died, having exhibited no symptoms which could lead to a suspicion of gangrene of the lungs. The body was examined thirty hours after death. The right lung was intimately adherent to the diaphragm: more than half its base was greatly softened, of a slaty, gray colour, a gangrenous odour, and dividing into shreds upon washing—(plus de la moitié de sa base considérablement ramollie, d’un gris ardoisé, d’une odeur gangréneuse, tombant en détritibus par les lotions aqueuses). This softening resulted from the infiltration of a sero-sanguineous fluid, of a gangrenous odour, into the substance of the lungs. Where the alteration was less considerable, the bronchi could be traced to their extreme ramifications. The mucous membrane was of a slaty-gray in this part, while in the larger branches it was only whitish. The portions of the lungs that escaped gangrene were hepatized, but the lungs were more free from fluid than usually happens in this degree of pneumonia.’—(*Revue Médicale*, Octobre 1826.)

VI. Inflammation of the Womb.

‘FOUR cases of this disease are reported to have occurred in the Hôtel Dieu in the second quarter of 1826. Two were fatal, and two recovered. The two that were cured owed their recovery to the repeated application of leeches and warm baths. The two women who died had been recently delivered: in one, peritonitis was united with metritis; in the other, inflammation was confined to the uterus and its appendages. The uterus was the size of the fist: on the right side it extended to the ovary, which was also swollen. The internal membrane was reddish, soft, and very tender; this tenderness extended sometimes into the substance of the uterus, and gave it a putrid appearance (*l’aspect du putrilage*!).

An incision being made transversely an inch above its neck, the uterus presented small collections of matter contained in its sinuses; and in the intervals of these the pus had infiltrated into the interstices of the fibres. The ovaries were reddish externally; and small collections of pus were found in the interior. The Fallopian tube participated in the inflammation.'—(*Revue Médicale*, Oct. 1826.)

VII. *Fistula Lachrymalis.*

IN the same Number there is a memoir upon this subject from the practice of M. Lisfranc, in the wards of La Pitié. M. Lisfranc considers fistula lachrymalis as proceeding, in the majority of cases, from an acute or chronic inflammation of the mucous membrane that lines the nasal canal; and that there is a strict analogy between the diseases of this membrane and those of the conjunctiva,—consequently that the treatment ought to be similar. He also regards leeches as stimulants when applied in small numbers, and as contra-stimulants when numerous used. The following case is favourable to M. Lisfranc's mode of treatment:—

'Lombarre, forty-five years, was seized with *un larmolement*, an escape of tears from the left eye, in 1814, in consequence of ophthalmia. A small tumour formed at the inner angle of the eye disappeared, and fistula lacrymalis was established.

'On the 23d of August, 1822, this patient entered La Pitié. At the internal angle of the eye there was inflammation of the conjunctiva. He was immediately bled from the arm, forty leeches applied to the mastoid apophysis corresponding to the fistula, and emollient fumigations directed to the nose.

'24th.—The inflammation remains, but in a less degree; twenty-five leeches are again applied to the left temple; the fumigations are continued, and the same regimen.

'25th.—The inflammatory symptoms have disappeared; the escape of the tears is less; the same treatment.

'26th.—A more liberal diet allowed.

'27th.—The tears began to escape by the inferior orifice of the nasal canal; and the cure was complete on the 30th.

'On the 5th of September a small tumour appeared in the situation of the cicatrix, which at first made us suspect the cure to be incomplete. A puncture was made in the abscess, which furnished a small quantity of well-secreted pus, but no tears. It quickly healed; and he was dismissed perfectly cured on the 7th of September.'—(*Revue Médicale*, Oct. 1826.)

VIII. *M. Andral on Phthisis Pulmonalis.*

M. ANDRAL's opinions on the subject of phthisis pulmonalis are stated in the third volume, just published, of *Select Cases* occurring in the Clinical Practice of M. Lermnier, Physician to the Hospital of La Charité, the subject of which is chronic diseases of the chest. His conclusions concerning the nature and seat of pulmonary tubercles very much resemble those recently advanced by M. Cru-

veilhier, who considers the vesicles to be the primary seat of the tubercles, and the latter a secretion, the result of mechanical irritation, if we understand his paper in the *Nouvelle Bibliothèque Médicale* for September. M. Andral's opinions are stated in the following terms:—

'1. Pulmonary tubercles are the product of a morbid secretion; consequently it seems improper to designate them under the appellation of tissue, as they have none of the anatomical characters of a tissue.

'2. The pathological process which precedes the tuberculous secretion is an active sanguineous congestion, similar to what precedes every secretory process, whether regular or irregular; but it is not necessarily a pneumonia, in the ordinary sense of that term.

'3. This secretion may take place indifferently in several of the tissues which enter into the composition of the lungs; and the opinion that the exclusive cause of tubercles is an inflammation of the white vessels, and their exclusive seat is these vessels and their ganglions, is in opposition to many well-established facts.

'4. The pulmonary *granulations* of Bayle are not tubercles in a nascent state; these granulations are red and soft before they become gray and hard: their granulated aspect is an effect artificially produced when the pulmonary lobules are cut or torn; and, far from being a new production, they are constituted by portions of lobules separately inflamed.'

With respect to the frequent complication of phthisis with hæmoptysis, M. Andral says, that, in many cases in which the patients have died during abundant hæmoptysis, he has not been able to recognise any other source of the expectorated blood than the mucous membrane; but in all the cases which he examined, with one exception, there were also tubercles in the lungs: in that one case, the patient seemed to have died in consequence of sanguineous exhalation from the bronchial surface. In these cases, the bronchial surface presents no other lesion than what is seen in cases of simple bronchitis; sometimes even it is pale, or, at most, has a whitish or slight rose-coloured tint. When the hæmorrhage has its source in the parenchyma of the lungs, those lesions are found which M. Laennec describes under the head of *pulmonary apoplexy*. As regards the connexion of hæmoptysis with phthisis, the following are the results of M. Andral's researches:—

'1. Many individuals have had abundant spitting of blood, and yet have not become phthisical.

'2. In others the first appearance of blood in the expectoration has preceded, by many years, the first appearance of phthisical symptoms.

'3. In other cases the first hæmoptysis has been immediately followed by all the symptoms which indicate the existence of pulmonary tubercles.

'4. Many patients are not attacked with hæmoptysis until after the tubercles in their lungs have acquired a considerable development, and phthisis is already far advanced.

‘ 5. It is not uncommon to see the tuberculous affection of the lungs go through all its periods, and death take place, without the least hæmoptysis being ever observed.’

Laryngeal phthisis, M. Andral, thinks, is not very common; he speaks thus of it:—

‘ 1. Chronic laryngitis, like acute laryngitis, may exist in an idiopathic form; but it is only in very rare cases that it can by itself give rise to the symptoms of consumption: laryngeal phthisis is then not at all a common affection.

‘ 2. In the greater part of the cases in which the symptoms of phthisis are accompanied by an affection of the larynx, those symptoms are to be referred to tubercles developed in the lungs, whether the tubercles have preceded or followed the laryngitis.’

IX. *Formation of Tubercles.*

To be convinced of the utter foolishness of the greater number of dietetic regulations, little more is necessary than to survey the very contradictory regulations which have been from time to time laid down for the sick. At this moment there are practitioners in England who confine their phthisical patients to vegetable and milk diet; and others who give them (almost to the exclusion of vegetables) animal food and wine. The French pathologists now think they have discovered that vegetable food encourages the production of tubercles, and that animal food may prevent it. This opinion, which is probably any thing but correct, seems chiefly to be founded on the rare occurrence of tubercles in carnivorous animals, and its frequency in those which are herbivorous. M. Huzard finds that tubercles are very common in cows; and hence, with admirable activity of inference, M. Segalas supposes cow's milk may favour their development in the human body: and it seems that this opinion is generally entertained in and about Paris.

X. *Incontinence of Urine.*

‘ M. LAIR proposes, in cases where this affection is occasioned by atony of the neck of the bladder, that an attempt should be made to stimulate it by the direct and momentary introduction of the tincture of cantharides, by means of a sound. He reports that he has been in this manner successful in three cases.’ — (*Biblioth. Méd.*)

XI. *Sudden Death.*

‘ A YOUNG man having died suddenly after indigestion, MM. Guiaud and Magail found a perforation in the left side and the posterior part of the diaphragm: the opening was oval, with rounded edges; its greatest diameter was at least three inches: the efforts to vomit had forced a considerable portion of the intestines through the aperture into the chest.’ — *Journal Complémentaire*, Oct. 1826.

There is no explanation of the manner in which this perforation was produced: from its being oval, and its edges being rounded, it

would not seem to have been the consequence of a rupture of the muscular fibres. In connexion with what we have observed respecting the cause of sudden death, there can be no doubt, that, in a case of this kind, sufficient unnatural appearances were found to account for it. It is probable that an individual thus circumstanced would die from two causes: first, an impediment to the mechanical action of the diaphragm; and, secondly, from the pressure of the intestines upon the lungs. It is altogether a very curious case.

—EDITORS.

XII. *Fungoid Tumour removed from the Breast.*

'THE left breast of a woman sixty-seven years of age was extirpated on account of a tumour, that exhibited all the appearances of fungus hæmatodes. On examination after removal, the tumour was discovered to enclose a cyst, lined with a serous membrane, and containing about ten ounces of a brownish serum. The membrane had some cartilaginous points upon it. The right mamma was atrophied and tuberculous.'—*Journal Complémentaire* for Oct. 1826. *From the Tr. of the Royal Society of Medicine of Marseilles.*

XIII. *Hydrophobia.*

'M. ROBERT has found a considerable swelling in the orifices of the ducts of Wharton, instead of the vesicles which Marochetti mentions.'—(*Journal Complémentaire.*)

XIV. *Case in which the Gall-bladder was wanting.*

'THE subject of this rare deficiency enjoyed perfect health, and died in consequence of a severe fall. The body was opened in the presence of several physicians, and there was found to be no trace of a gall-bladder, or of the cystic duct; the yellow tinge commonly observed on the transverse arch of the colon was not present, nor was such colour observed in the usual situation of the gall-bladder: the hepatic duct was carefully examined, and found to be double the usual size. The possible existence of this peculiarity has with very little reason been denied; for if there had not even been previous instances of it, the use of the gall-bladder certainly does not appear so indispensable to the human body, as that the latter could not be supposed to exist without it. The occasional absence of the gall-bladder was even noticed by the ancients; and many animals are unprovided with it.'—(Vide Haller, Lib. xxiii. Sect. 2.) —(*Journ. des Sc. Méd.*)

XV. *Portions of a Fetus found in the Scrotum of a Male Infant.*

'ABOUT eighteen months ago, the daughter of a labourer in the neighbourhood of Braunau, in Austria, was delivered of a male child, the scrotum of which was observed to be considerably tumefied; and this tumefaction increased as the child grew older. The tumour attained the length of five inches, and was two and a half

in depth; and, in opposition to those who considered it a hernia, M. Fatti laid it open, and discovered the ribs, the vertebral column, the two lower extremities as far as the knees, and the two orbits of a fœtus. These were extracted, the infant bore the operation well, and is likely to live.'—(*Bull. des Sc. Méd. Sept.*)

SECTION III.—INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. *Experiments upon the time required for Substances introduced into the Animal System to be discovered in the Urine.* By Dr. G. A. STEHBERGER.

'THE object of these experiments is to ascertain what substances, introduced into the stomach or applied to the skin, are discoverable in the urine, and the time required for their passage.

'The experiments were made upon a boy of thirteen years of age, who was afflicted with an inversion of the bladder (*atteinte d'une inversion de la vessie*), a subject peculiarly favourable for such an investigation, because the urine, which continually passed from the ureters, could be collected and examined every minute. At the inferior part of the abdomen a round tumour was perceptible, very red, and of a spongy texture: it was situated in a hollow of the pubic region, and adhered by its edges to the skin. This tumour was moist, covered with mucous flocculi, and extremely sensible to the touch. When the child contracted the abdominal muscles it became a little smaller, and by pressing it from below upwards, the orifices of the ureters were visible, from whence the urine dropped continually. The child could neither prevent nor hasten the flow of urine. Immediately under the tumour there was a small penis, cleft along its whole surface, and forming a groove; upon each side of the inguinal ring was a tumour, forming a small scrotum, and at the inferior extremity of these elevations the testicles were evidently hanging to the spermatic chords. The right testicle was larger than the left, and on the right side there was an inguinal hernia, readily reducible. There was no trace of the umbilicus.

'Most of the experiments were made in the morning, fasting, in a room, the ordinary temperature of which was 56 F. His urine was always examined previous to giving any particular substance, for the purpose of comparing it with what came away afterwards. The urine collected before the experiments was generally of a deep yellow colour, a disagreeable odour, and saline taste. It coloured reddened turnsole paper blue. Immediately after the introduction of a substance into the stomach, the urine was collected in separate vessels, at intervals of five or six minutes, which were placed in the

order of their being filled, in order to ascertain whatever differences might exist. As soon as the substance experimented on was quite evident in the urine, this fluid was collected at longer intervals, varying from a quarter of an hour to half an hour, which was persisted in till the matter employed could no longer be detected. In this manner its first appearance was ascertained, its increase, its highest point, its diminution, and total disappearance. An interval of two days was generally suffered to elapse between the separate experiments. They were all witnessed by Professor Tiedemann.

The experiments, twenty-five in number, are given at length. We shall only give the results.

Of the substances introduced into the stomach, the following were manifested in the urine :—

‘ The colouring principle of rhubarb ; that of cherries ; that of madder ; that of bilberries ; that of Campeachy wood ; that of indigo.

‘ Cassia—but the urine was neither coloured nor black, as Boerhaave has reported ; nor green, as asserted by Lewis. The following is the experiment with cassia :—

‘ Six drams of cassia pulp were given at five-and-thirty minutes past seven. At half-past eight, the addition of potash gave a faint red tinge. The colour gradually deepened, and became of a red brown hue. Towards half-past eleven, it had become clear ; but in the evening, and even the next morning, a light red tint was produced by the addition of potash.

‘ Gallic acid was also discovered in the urine.

‘ The astringent principle of uva ursi.

‘ The cyanuret of potassium and iron, and one of the constituent principles of the inspissated juice of the elder.

‘ The colouring principle of turnsole, the bitter principle of quassia, the acetate of iron, &c., were not found in the urine, though introduced into the stomach.

‘ Among the substances employed in the bath by fomentations and frictions on the skin, the oil of turpentine and acetate of potash only were discovered in the urine. The oil of turpentine was found also when it had been inspired.

‘ With respect to the time required for the passage of substances from the stomach to the urine, great differences exist ; some being very quickly discoverable, and others only after the lapse of a considerable time. They may be ranged in the following order :—

| | | |
|----------------------------------|-------|-------------|
| ‘ Madder appeared in about | - | 15 minutes. |
| Indigo | - - - | 15 |
| Rhubarb | - - - | 20 |
| Gallic acid | - - - | 20 |
| Decoction of Campeachy wood | - | 25 |
| Colouring matter of bilberries | - | 30 |
| Colouring matter of cherries | - | 45 |
| Astringent principle of uva ursi | - | 45 |

| | | | |
|-----------------------------|---|---|-------------|
| Cassia pulp | - | - | 55 minutes. |
| Cyanuret of iron and potash | - | - | 60 |
| Elder juice | - | - | 75. |

'Turpentine inspired, was exhibited in the urine in a quarter of an hour; rubbed upon the skin, twenty-five minutes past before it was perceptible.

'Excepting cassia pulp and gallic acid, all these substances disappeared from the urine in a few hours, varying from three to nine. The gallic acid continued perceptible for eleven hours, and the cassia pulp for twenty-four.

'Dr. Stehberger deduces from these experiments the great importance of the kidneys as assimilating organs. "Different substances absorbed in the stomach, in the intestinal canal, or by the skin, are received into the mass of the blood, but not being capable of assimilation, are separated from that fluid by the labour of the kidneys, which thus powerfully contribute to the maintenance of the proper chemical composition of the blood."—(*Journal Complémentaire* for October 1826.)

These experiments seemed to have been made with much care; and the individual upon whom they were made was a peculiarly favourable subject. With respect, however, to the nature of the malformation in this instance, we suspect the author to be mistaken. He seems to consider it an actual inversion of the bladder, the secreting surface being external. The fact is, that in all such cases the bladder is nearly wanting. Those who wish to inquire particularly into this subject, we refer to a paper in the fourth volume of the *Edinburgh Medical and Surgical Journal*. It is written by Dr. Duncan, jun., and is particularly deserving perusal. Hernia appears to be no uncommon accompaniment of these malformations.—EDITORS.

II. *Experiments and Observations on the Effects of Ergoted Rye upon Man and other Animals, &c.**

'From these experiments, apparently conducted with every precaution necessary to insure an accurate result, it follows that ergoted rye really exerts a very pernicious influence upon the animal economy. We are the more anxious to call the attention of our readers to this subject, because many authors have denied, and all have misstated, the morbid symptoms produced by this substance. The following experiments, therefore, cannot fail to prove interesting to the profession.

'*1st Experiment.*—On the 21st of July, an ounce of spurred rye was infused with one pound and a quarter of water: the infusion had a slight tinge of a violet colour, a very disagreeable smell, and an unpleasant insipid taste. Four healthy persons experienced no ill effects from a dose of two coffee-cups full of this infusion.

* Versuche und Beobachtungen über die Wirkung des Mutterkornes auf den menschlichen und thierischen Körper, &c. &c. Dr. C. J. Lorinser. Berlin, 1824.

2d Experiment. — On the 20th July an infusion was made with two pounds of *boiling* water, and two ounces of ergoted rye; this infusion was stronger, of a deeper colour than the first, and had a still more unpleasant smell and taste. At nine o'clock in the morning, six persons took each three cupsful of this infusion. After the expiration of two hours, three complained of a feeling of heat in the abdomen, and more particularly in the epigastrium, together with a general sensation of uneasiness, considerable nausea, and inclination to vomit. These symptoms subsided before noon, at which time these three gentlemen sat down to dinner with a good appetite. The other three did not experience any annoyance, except a feeling of warmth, and excitation in the region of the stomach.

3d Experiment. — As the very disagreeable smell and taste of the infusion had excited a feeling of disgust, it was determined to use the ergoted rye in substance. On the 4th of August, five persons took each two drachms of the latter, spread on three slices of bread and butter. These five, whom we shall call A, B, C, D, and E, wrote down the following account of what they experienced: — *A*, in the course of one hour, felt a slight sensation of pain in the epigastrium, together with symptoms of determination to the head, such as vertigo, increased warmth, and redness of the face, &c. In a short time after this he had a natural stool. At half-past eleven* he was annoyed by a considerable dryness of the throat and mouth, periodical pains in the belly, and repeated eructations of an unpleasant taste; at noon, slight nausea, increased flow of saliva, some inclination to vomit, and fetid flatus. In half an hour more, the tormina and borborygmi increased, the nausea continued, and the head became more engaged. At one o'clock repeated thin stools, voided with some tenesmus. At two o'clock, when he dined, all these symptoms had disappeared, leaving no other inconvenience but a great thirst, and occasional griping. — *B* experienced, in half an hour after the dose, a feeling of increased warmth in the epigastrium, and dryness of the mouth. This was soon succeeded by an increase of saliva, repeated eructations, and slight nausea; these symptoms increased until about eleven o'clock, when he felt inclined to vomit. He sought relief by walking about in the open air, but in vain, and soon after vomited, together with other matters, a portion of the bread. At half-past eleven he vomited the remaining portion; and in ten minutes after he vomited a third time, with much retching. As his stomach was previously emptied, the third fit of vomiting only discharged mucus. The sickness now decreased, but some nausea and an increased flow of saliva continued the whole day, during which he felt no desire for food, and in the evening still complained of weakness. — In *C*'s case the nausea, increased flow of saliva, tormina, and headach, commenced in one hour after the dose. He felt himself so sick in the stomach,

* We suppose this experiment, like the preceding one, began at nine o'clock.

that he could procure no relief, either by an horizontal position, or by walking about in the open air. The nausea and headach, together with violent pain in the abdomen, continued until two o'clock, when he dined, but of course without feeling any relish for his food. After dinner, however, he found himself somewhat better, and a few loose stools about eight in the evening were followed by complete relief.—*D* said, that in half an hour after swallowing the ergoted rye, he felt a sensation in his stomach, as if he had not eaten any thing for several days. This sensation soon rose to actual hunger, so that, at eleven o'clock, he felt himself obliged to eat his dinner, which he did with a good appetite. In a quarter of an hour after dinner, he felt himself sick in the stomach; experienced an increased flow of saliva, and considerable pain in the belly; and in a short time he vomited what he had eaten. The vomiting soon recurred, and the nausea and tormina continued until five P.M., when he had a rigor of several minutes' duration, followed by a moderate sweat, after which the pain ceased, and he no longer found himself unwell.—*E* felt an increased warmth in the epigastrium at ten o'clock, and griping pains; his pulse too was hurried, and his face warm and red; at half past ten he experienced a disagreeable sensation in the head, soon followed by a headach, and a sensation of dryness and burning heat in his mouth and throat. The latter were, in the course of half an hour, succeeded by an increased secretion of saliva and mucus, which made it necessary for him to spit constantly. This was accompanied by severe pains in the epigastrium and nausea, which, at eleven, was very distressing. The tormina became now so painful that he could no longer hold himself erect, and, even when in bed, he was obliged to lie with his body bent towards his legs. Although the nausea increased, yet he could not vomit even with the assistance of tickling the fauces, so that, from eleven to twelve o'clock, his situation was truly pitiable; towards one, some thin and fetid stools, preceded by borborygmi and flatus, were procured.

'These experiments fully establish the pernicious effects of ergoted rye; and others, made by the same gentlemen, prove that it loses its pernicious qualities when *thoroughly roasted*, for they experienced no bad effects from doses of two drachms of the dried (gedörrten) powder. It was likewise proved that the activity of this substance is not impaired by keeping for two years. A number of experiments were likewise made on men and animals with bread made of ergoted rye, and its bad effects were precisely similar to those already detailed. Fresh bread, still moist and warm, seems its most active vehicle.'—(From *Rust's kritisches Repertorium*.)

III. Use of *Uva Ursi* in *Phthisis*.

SEVERAL years ago the *uva ursi* was very strongly recommended in cases of consumption by a physician of Oxford justly esteemed for his learning and practical experience. As some practitioners, influenced by so very respectable an example, are yet, we know,

in the habit of trusting much to this medicine, not only in consumption, but in a number of complaints which are vaguely denominated 'glandular affections,' it may not be improper to give insertion to the following passage in a little practical work which has been forwarded to us by Mr. Walker, surgeon-apothecary, of Oxford:—

'I observed nothing in the effect of *uva ursi* in pulmonary consumption, to induce me, *in the least degree*, to alter my general opinion of the total inefficacy of *reputed specifics* in this disease.

'At page 94 of a work entitled *Cases of Pulmonary Consumption, &c.* treated with *Uva Ursi*, published in 1805, the author, (a physician of the Infirmary, possessing indeed the *credulity* naturally incident to a young practitioner, but *fortunately* with less confidence or self-conceit than is ordinarily the case,) in a very handsome manner notices my attention to some of the cases which occurred at the Radcliffe Infirmary; and particularly in one case, where that gentleman states, that he asked my opinion respecting the nature of the complaint before he began the use of *uva ursi*, in which I concurred with him that it was evidently a case of *incipient pulmonary consumption*, and which opinion has since been confirmed by that person dying consumptive.

'This gentleman likewise intimated a wish to know my opinion respecting the *efficacy* of *uva ursi* in those cases which had passed under my observation, to which, influenced chiefly by his zeal, I had given very particular attention; especially one, whom I watched *incessantly*, from her entrance into the Infirmary to her death, a period of about seven weeks, viz. Mary Hopgood, a middle-aged woman, who, according to her account, had enjoyed very good health until she had taken cold, about six months before her admission into the Infirmary, which was in the beginning of July 1803, upon whom I could discover no sensible effect whatever attributable to the *uva ursi*, except *nausea and loathing of nourishment* when the medicine happened to be urged beyond what her stomach could bear, either upon the state of the pulse or the progress of the disease: her urine, indeed, as is usual in the exhibition of *uva ursi*, was tinged with the colour of that drug.

'Thus circumstanced, and with the addition of further evidence of the same tendency, I found it impossible, consistently with my judgment and conscience, to give a favourable report, and therefore got rid of the question in the most delicate manner I could, being well aware that nothing but an equal degree of professional experience to my own could have induced that gentleman to view this matter in the same light as I did myself.

'Having been taught, by repeated observation, to consider *uva ursi* as a useless drug, I was induced to make the following trial respecting its supposed *sedative* quality: accordingly, I attended to the state of the pulse in two patients every night and morning, for nearly six weeks, one of whom was taking *uva ursi* alone, and the other the same medicine, but in conjunction with opium; the result was, that in the latter person the pulse became progressively

slower, but not in the former. In each instance I attended to the ratio of the pulse previously to their commencing this plan.

' To the effect, therefore, of the opium which was joined with the uva ursi, as far as medicine was concerned, I ascribed, at that time, the alteration of the pulse and amendment in the patient, who had the "disease in the urinary organs," which led the author to the trial of uva ursi in pulmonary consumption, and which is the subject of the first chapter.

' This "elderly man" took, as in the author's words, "ten grains of uva ursi, rather more than that quantity of bark, and half a grain of opium, thrice in the day, for about seven weeks, and was then discharged, most remarkably improved in his general health, and very materially relieved with regard to the local affection." An alteration by no means attributable to the uva ursi, and which, I am confident, would have equally occurred had any other harmless substance been substituted in its stead; believing myself, that *rest, and the comforts of the Infirmary*, had no small share in the beneficial effects which were produced on this poor old man, whom I well recollect, and who had before worked hard and fared but indifferently.

' I should not have entered so minutely now on this subject, had I not thought it necessary, on account of the place to which I have assigned uva ursi in this work, and in which place of obscurity I should hope, in future, it will be quietly suffered to remain.

' Thus it happens that inefficacious drugs obtain a place in the catalogue of remedies, and unfortunately retain their place, because contemporary or succeeding practitioners have wanted a due degree of experience to fortify them with a sufficient degree of confidence to put a negative upon them! for I am certain, had this gentleman witnessed the *whole practice of an Infirmary*, with his discernment and attention, for twenty years, he could no more have proposed uva ursi as a remedy for pulmonary consumption, in any stage of it, than he could have proposed it for the purpose of arresting or checking the progress of advancing old age.

' Upon this occasion, according to the author's directions, the healthy-looking or well-preserved leaves only were used (the stalks and withered leaves being rejected), which amounted, upon an average, to somewhat less than three-fourths, by weight, of the whole of the specimens, as received from the druggist.

' There are two evils arising from a pertinacious adherence to a *specific*, mistakenly so considered. 1st. All other means, consisting of an appropriate regimen, palliating medicines, and various other salutary measures, are entirely overlooked; whereas, by a judicious application of these, nature might be enabled, in many cases, particularly in recent affections, to conquer the disease, and, in all cases, the patient's sufferings mitigated to the last. 2d. It too commonly happens that the fallacious specific is not entirely of a passive nature: hence the sufferings of the patient are aggravated by the supposed remedy. This accumulation of evil was most strikingly exemplified in the instance of Mary Hopgood above

mentioned; and which, to any person whose long experience and great familiarity with cases of a similar nature had taught real or true professional wisdom, must necessarily prove extremely irksome and distressing.

‘I should not, for various reasons, have expressed my sentiments so freely on this work, but for the great importance of the subject, together with the consideration, that my experience of the effects of medicine on diseases generally, conjointly with my observations in this particular instance, renders it morally impossible I can err when I assert, that *the administration of this drug in PULMONARY CONSUMPTION aggravates the sufferings naturally incident to the disease itself*, unless confined to so small a dose as to render it *merely inert*.

‘I wish it to be understood that I do not take upon myself to assert positively that *uva ursi* has no effect with respect to *altering the ratio of the pulse*, provided it be exhibited in doses sufficiently large; but as I have observed before, respecting the exhibition of *digitalis*, I consider this as no criterion of its salutary effects on the disease, but rather otherwise. It is remarkable, however, that in another instance of its exhibition for five or six weeks, as before, the author and myself attended separately to the state of the pulse, and at the end of that time, upon comparing notes, it was found there had been no sensible alteration in the pulse attributable to the *uva ursi*.

‘With respect to the astringent quality of *uva ursi*, and its peculiar determination to the urinary passages, demonstrated by its effect on the urine of some patients, when persisted in for a length of time, which, I presume, originally led to the exhibition of it in various diseases of the urinary organs, and for which it still preserves a *questionable kind of celebrity*, as in *catarrhus vesicæ*, *diabetes*, &c. I confess I could never observe any decidedly good effects from its exhibition in such disorders; and I am certain, as I shall have occasion to speak of more fully hereafter, that much more may be done by other means, particularly in the former of these diseases.

‘Several professional persons, as I well know, entertain an opinion, that at the worst *uva ursi* is an inoffensive medicine, believing that “if it does no good it can do no harm.” In order, however, to satisfy myself respecting the peculiarly unpleasant sensation this drug produces in the stomach, so frequently described to me by patients, as well since I left the Infirmary as before, when prepared as above, I took twenty grains of it myself about two hours after breakfast, which deranged my stomach so much as entirely to unfit it for relishing my dinner; and, by the by, my stomach is not easily diverted from its purpose when dinner presents itself. This effect is commonly produced in the stomach of persons debilitated by disease, when so much as ten grains are taken, or from thence to fifteen.’

IV. Medical Uses of the Madár.

THE madár is the powder of the root of the *Asclepias gigantea* of Lamarck, the *A. procera* of Willd., a species very similar to the *madorius* of Rumphius, the *A. gigantea* of Willd.

‘The madár is prepared as follows:—The roots are dug from a sandy soil in the months of April and May. They are well washed in clear water till every particle of soil is removed; the moisture then carefully absorbed by wiping with a cloth. Placed in the open air, they are allowed to dry so far that the milky juice shall become inspissated, so as not to flow during the subsequent operation. The outside brown crust is then to be scraped off, or separated from the woody part, and dried for use. When reduced to a powder, it must be preserved in bottles, well corked, or it is apt to attract moisture.

‘The diseases in which the madár has been found beneficial are various. It acts as a powerful tonic and alterative, as a stimulant and deobstruent, and, combined with opium, as a sudorific.

‘It has been given with great advantage in syphilis; lepra; in cutaneous eruptions and dropsy; in rheumatism, hectic fever, and tabes from glandular obstructions; in tape-worm and in intermittents. It stimulates the extreme vessels on the surface, and diminishes the velocity of the general circulation. It has been found very efficacious in that species of cancer, so common among the natives of India, called *lupus*, and in all the varieties of leprosy or elephantiasis.’

This account of the properties of the madár is given by Mr. Playfair in the 1st vol. of the Transactions of the Medical and Physical Society of Calcutta. The editor of the Edinburgh Medical and Surgical Journal having received a supply of the medicine, has subjected it to some trials, and says, ‘Its sensible effects are not very obvious. We however observe, that it has at last produced nausea, with considerable heat at stomach, and that it had even been rejected. One patient observed it to have a diuretic effect, but to diminish the alvine discharge; but in another case it seemed to move the bowels. It did not appear to cause an increase of perspiration, nor sensibly to augment the heat of the surface, nor have its effects on the pulse been sufficiently ascertained; but it seemed, where there were ulcers, with passive inflammation, to impart a degree of activity to the small vessels, which led to a decided improvement of the sores.’—(*Ed. Journ. Oct.*)

V. Supposed Hermaphroditus.

A PREPARATION, in which there were some appearances of this conformation, was lately presented to the Section of Surgery of the French Academy by M. Bonnie, and reported upon by MM. Réveillé, Parise, Roux, and Moreau. The subject was a child, born of healthy parents, and inscribed, notwithstanding a peculiarity observed in the structure of the genital organs, as a female child in the public registers. At the age of four years, some anomalous

circumstances were observed by M. Bonnie: the voice was deep, the skin brown, the muscles strongly developed, and the habits of the child those of a boy: the pubes were covered with hair, the labia very large, the clitoris, in its ordinary state, eighteen lines in length, and when erected, nearly two inches: there was also a real prepuce and glans, in the middle of which was a cicatrix, representing the extremity of the urethra, which passage, according to the account of the child's mother, had been obliterated by the introduction of a stilet, by a surgeon, some months after birth. The existence of the meatus urinarius and vagina was ascertained, the diameter of the latter very small. When the body was examined, after death, there were found to be, a uterus, round ligaments, ovaria, and, in short, all the organs proper to the female. This example adds one to many heretofore recorded, in which the pretended conformation of the hermaphrodite was nothing more than a variety in the structure of the female organs. The occurrence of this variety is probably not more common in France than in England, but the public exhibition of it is. Circumstances may undoubtedly occur in which a knowledge of its general character may be important.

VI. *Monstrosity observed in China.*

A LITTLE statue was presented to the French Academy in August last, representing a living Chinese monster which had been seen at Canton by two English physicians, whose names are reported as Pearson and Swington by some of the journals, and Pearson and Zurington by others. The description, which is given at great length by some of the authorities, is at least very singular. A well-made man, of one-and-twenty years of age, has attached to the anterior and upper part of his trunk a sort of homunculus, or almost the entire body of a fœtus of the male sex; and this appendage adheres to him, that is, to his sternum, by the neck; and at the point of adhesion there is a kind of resemblance to the head of a fœtus. This little parasite does not appear to thrive very well, for the skin and bones of the upper extremities are described as being in actual contact: the lower extremities, however, are in better condition; and, in consequence of it we suppose, at one time exhibited a propensity to such inconvenient activity, that the greater subject of the union took upon him to restrain their saltatory movements by a bandage, since which time they have been completely quiet. There is far from being a complete separation of interests, however, between the Chinese and his appendage; for when the fœtus is pricked or pinched, the grown-up man feels the pain. A commission was appointed to report on the subject of this statue, and they succeeded in searching out many other examples: they demurred, however, concerning the activity of the lower extremities. This is all very well, and we wait for Messieurs Pearson and Swington's account. The whole matter, as related in the French journals, has but a slight air of credibility.

VII. *On the Confinement of Dry Gases over Mercury.*

‘ THE results of an experiment made by Mr. Farrady, and quoted as such, having been deemed of sufficient interest to be doubted, he has been induced to repeat it; and though the original experiment was not published by him, he is inclined to put the latter and more careful one upon record, because of the strong illustration it affords of the difficulty of confining dry gases over mercury alone. Two volumes of hydrogen gas were mixed with one volume of oxygen gas, in a jar over the mercurial trough, and fused chloride of lime introduced, for the purpose of removing hygrometric water. Three glass bottles, of about three ounces capacity each, were selected for the accuracy with which their glass stoppers had been ground into them; they were well cleaned and dried, no grease being allowed upon the stopper. The mixture of gases was transferred into these bottles over the mercurial trough, until they were about four-fifths full, the rest of the space being occupied by the mercury. The stoppers were then replaced as tightly as could be, the bottles put into glasses in an inverted position, and mercury poured round the stoppers and necks until it rose considerably above them, though not quite so high as the level of the mercury within. Thus arranged, they were put into a cupboard, which happened to be dark, and were sealed up. This was done on June 28, 1825; and on September 15, 1826, after a lapse of fifteen months, they were examined. The seals were unbroken, and the bottles found exactly as they were left, the mercury still being higher on the inside than the outside. One of them was taken to the mercurial trough, and part of its gaseous contents transferred: upon examination it proved to be common air, no traces of the original mixture of oxygen and hydrogen remaining in the bottle. A second was examined in the same manner; it proved to contain an explosive mixture. A portion of the gas introduced into a tube with a piece of spongy platina, caused dull ignition of the platina: no explosion took place, but a diminution to rather less than one-half. The residue supported combustion a little better than common air. It would appear, therefore, that nearly a half of the mixture of oxygen and hydrogen had escaped from it, and been replaced by common air. The third bottle, examined in a similar manner, yielded also an explosive mixture, and upon trial was found to contain nearly two-fifths of a mixture of oxygen and hydrogen, the rest being a very little better in oxygen than common air.

‘ There is no good reason for supposing that this capability of escape between glass and mercury is confined to the mixture here experimented with; probably, every other gas, having no action on the mercury or the glass, would have made its way out in the same manner. There is every reason for believing, that a small quantity of grease round the stoppers would have made them perfectly tight. —(*Journal of Science.*)

VIII. *Cafein.*

‘ M. GAROT adopts the following method of preparing this sub-

stance:—A quantity of bruised raw coffee was twice infused in boiling water: the brown liquors, when cold, were mixed; on the addition of a solution of acetate of lead, a very abundant precipitate, of a pistacio green colour, was obtained. The liquor after filtration was yellowish, but after separating the excess of acetate of lead, by means of sulphuretted hydrogen, it became nearly colourless: the free acid remaining in solution was saturated by ammonia, and, by careful evaporation, crystals of cafein are obtained, which, by purification, were procured in colourless silky crystals. It appears by these experiments, that the colouring and extractive matter of the coffee are precipitated by the oxide of lead, while the cafein, not combining with it, crystallises afterwards from the filtered infusion.'—(*Journal de Pharm.*)

IX. Iodine found in the Mineral Spring of Bonnington, near Leith.

EXTRACT OF A LETTER TO PROFESSOR JAMESON FROM
DR. TUCKER.

.... 'THE Bonnington mineral water, in addition to the other substances hitherto discovered in it, contains iodine, which may be readily detected by the following method:—Evaporate a pint of the water to dryness; take up the soluble parts in a drachm or two of a diluted solution of starch, quite cold, and add a few drops of concentrated sulphuric acid; the characteristic blue colour will then make its appearance. I prefer the use of sulphuric to nitric acid or chlorine, for decomposing the hydriodic acid; for it effects that object with certainty, and does not decompose the iodole of starch, or prevent its formation, as the last two are apt to do.

'The greater part of the iron in the Bonnington water is under the form of the carbonate of iron, which is held in solution by carbonic acid. It also contains the muriatic and sulphuric acids, in combination with lime, magnesia, and soda, the last of which is the predominating base. Potash is also present, and forms the hydriodate of potash with the hydriodic acid. Its quantity, however, is more than sufficient for saturating that acid; for the residual salts still contain it after the hydriodate of potash has been removed by alcohol.

'I have examined portions of water,—the springs of Harrowgate, Moffat, and Pitcaithly,—but could discover in them no trace of iodine.'—(*Edin. New Phil. Journal.*)

X. Fluidity of Sulphur at Common Temperatures.

'MR. FARADY having placed a Florence flask containing sulphur upon a hot sand-bath, it was left to itself. Next morning, the bath being cold; it was found that the flask had broken, and, in consequence of the sulphur running out, nearly the whole of it had disappeared. The flask being broken open was examined, and was found lined with a sulphur dew, consisting of large and small globules intermixed. The greater number of these, perhaps two-thirds, were in the usual opaque solid state; the remainder were

fluid, although the temperature had been for some hours that of the atmosphere. On touching one of these drops it immediately became solid, crystalline, and opaque, assuming the ordinary state of sulphur, and perfectly resembling the others in appearance. This took place very rapidly, so that it was hardly possible to apply a wire or other body to the drops quick enough to derange the form before solidity had been acquired : by quick motion, however, it might be effected ; and by passing the finger over them, a sort of smear could be produced. Whether touched by metal, glass, wood, or the skin, the change seemed equally rapid ; but it appeared to require actual contact : no vibration of the glass on which the globules lay rendered them solid, and many of them were retained for a week in their fluid state. This state of the sulphur appears evidently to be analagous to that of water cooled in a quiescent state below its freezing point ; and the same property is also exhibited by some other bodies, but I believe no instance is known where the difference between the usual point of fluidity and that which could thus be obtained, is so great : it in the present instance amounts to 130° , and it might probably have been rendered greater if artificial cold had been applied.—(*Journal of Science.*)

XI. *Detection of Arsenic.*

‘ THE following elegant test of the precise nature of the metallic crust (viz. that obtained by Dr. Christison’s method of detecting arsenic), when its quantity is too minute for its physical characters to be unequivocally ascertained, was communicated to Dr. Christison by Dr. Turner, lecturer on chemistry in Edinburgh. It consists in chasing the crust up and down the tube by heat till it is all oxidated, when it assumes the appearance of sparkling crystals, which may be ascertained, by a microscope of four powers, to be octohedra.’—(*Extract from Edin. New Phil. Journal.*)

XII. *Spontaneous Perforation of the Œsophagus and Stomach.*

Two cases of this kind are reported by M. Lévillé as having occurred in his practice. (*Bibliothèque Médicale.*) The first was that of a man, twenty-two years of age, who had been bitten six months before in the right hand by a dog : the animal was destroyed before its madness was ascertained. Some time after the wound had healed, the man was suddenly attacked with severe pain in the right shoulder and in the right side of the chest, with strangulation, difficult deglutition, delirium, vomiting, &c., and died in the night. On opening the body, the Œsophagus was found to be perforated, with effusion into the posterior mediastinum. M. Lévillé ascribed this perforation to the formation of a pustule, which had destroyed the parietes of the Œsophagus an inch and a half above the point where it passes through the diaphragm : the edges of the opening were thin and smooth.

The subject of the second case was a man of fifty-five, who had three or four attacks of syncope in the space of the previous year ; and afterwards symptoms of an affection of the stomach, with con-

stipation, but without tumour or vomiting: at last he was seized with acute pain during the night in the epigastrium, with great abdominal tension, and died before the morning. On dissection, an oval opening was found, about eight or ten lines in circumference, on the anterior face of the stomach, near the small curvature, four fingers' breadth from the pylorus. Round the perforation there were several yellowish tubercles, about the size of a grain of barley, and the mucous membrane was destroyed to a greater extent than the perforation had taken place. The left auricle of the heart was twice the natural size, and there was a partition in the septum which divides it from the right, which was probably the cause of the attacks of syncope.

XIII. Notice of Animal and Vegetable Substances found at Thebes and Memphis.

THE animal and vegetable substances found in the ruins of Thebes and Memphis form part of the cabinet of antiquities of M. Passalacqua, who has passed several years of his life amidst the ruins of Egypt. They are now in France, and are described in the *Revue Médicale* for September, by M. Julia-Fontenelle.

Although the precise period of the destruction of Thebes cannot be ascertained, it may at least be stated as having taken place more than 3000 years ago. Among the objects which have been brought to light by the persevering industry and archæological zeal of M. Passalacqua, are such as were employed in religious ceremonies, in agriculture, in domestic economy, for embalming, for funerals, &c.; manuscripts on papyrus, clothes, tombs, vases, surgical and musical instruments, marbles, statues, coins, jewels, colours, &c. Among the vases are many of different forms and sizes; they are of oriental alabaster, serpentine, spath, baked earth, enamelled earth, &c. In the greatest and finest of these was a soft, pitchy, brown substance, of an acrid odour and taste: in most of the others there were bitumino-resinous preparations employed in embalming. Among the objects of curiosity was a very rich portable medicine chest, decorated with hieroglyphical figures, and consisting of three successive coffers, the inner one made of platted straw, with an ivory handle, by which to lift it out: in this third coffer were six vases, five of oriental alabaster, and one made of lava: in these vases, which were very beautiful, there were several kinds of medicines, which have not yet been analysed. The coffer also contained a wooden spoon, and twenty-five different roots, hereafter to be examined.

The animal substances consist of a great number of human Egyptian and Greek mummies, of men, women, and children, and of different ranks in society. These mummies have been prepared in different ways:—1st. By taking out the viscera, and filling the cavities, after they were carefully cleaned, with palm-wine, and resinous and aromatic substances. 2d. By injecting asphaltum in the liquid resin of the cedar into the abdomen without opening it,

leaving the body for ten days immersed in a solution of natron, and then letting the resin flow out, and with it the dissolved intestines, &c. 3d. By macerating the bodies for seventy days in an alkaline solution, which was the method of embalming the poor. Besides these human mummies, there are numerous mummies of animals; rams, cats, dogs, the ibis, apes, little crocodiles, fishes, vultures, sparrow-hawks, owls, rats, serpents, frogs, toads, birds, insects, &c. There is also the egg of an ibis which was found in a tomb: until this time the most ancient were those found at Pompeii.

The vegetable substances, the fruits, and fragments of plants, which were discovered by M. Passalacqua in the tombs of ancient Egypt, are almost all such as are yet met with in that country. The vegetation consequently of these distant epochs, and the form and structure of the plants, remains the same. M. Kunth and M. Julia-Fontenelle recognised the following:—

FRUITS.

Crucifera Thebaica, Delille, Description of Egypt, vol. i.

Phœnix dactylifera, Linn. Dates.

Punica granatum, Linn. Pomegranates: very dry; the skin a dark reddish colour.

Ficus sycomorus, Linn. Sycamore: *ficus Pharaonis camerarius*, Lamarck.

Ficus carica, Linn. Common figs.

Nuts and Fruits: *Balanites Ægyptiaca*, Delille. *Ximenia Ægyptiaca*, Linn. *Myrobalanus chebulus*, Vesling. The nuts very hard, and a hole pierced in the upper half.

Juniperus Phœnicea, Linn. Phœnician juniper.

Citrus aurantium, Linn., *varietas fructu amaro*. Bitter orange.

Areca Passalacqua, grains marble coloured, hollow in the centre; species not known.

Vitis vinifera, Linn., *varietas monopyrena*; well-preserved chasselas, very dry, blackish, and acid.

Other fruits were found which were unknown.

SEEDS.

Diospyros. M. Kunth could not determine whether they were the *diospyros lotus*, or the *embryopteris glutinosa* of Roxburgh.

Cucurbita.

Ricinus communis, Linn.

Triticum vulgare, Linn.

Cyperus esculentus.

BRANCHES AND LEAVES.

Ficus sycomorus, sycamore: the coffins in which the mummies were placed were made of the wood of this tree; and also the tomb of the high priest.

Olea Europea, Linn. The stalk and leaves well preserved.

STALKS WITH THE UMBELS.

Cyperus papyrus, Linn. Papyrus and biblos of the ancients:

the height of the stems is six feet: they are well preserved, as well as the umbels.

Some of the above substances have been submitted to various chemical experiments, from which it appears that the *Egyptian wheat* had been dipped in some resinous liquor for the purpose of preserving it; the fecula, even at the distance of 3000 years, is well preserved: there is no trace of gluten, but an acid in the place of it, the small quantity of which has prevented its nature from being ascertained. The seeds of the *ricinus communis* were also well preserved, their oil had become a little rancid, and an acid was developed within them. The supertartrate of potash was preserved in the raisins, which gave signs of an acid, but none of the saccharine principle. The bones of the ox, found in the sepulchral chamber discovered by M. Passalacqua, were scarcely altered in their constituent parts. The substances which have been called *balsams*, found in the vases, do not seem properly so denominated, having no trace of benzoic acid: they rather approach to the *asphaltum* or bitumen of Judæa, which was employed in embalming by the Egyptians, under the name of mineral mummy. The asphaltum found on the surface of the Dead Sea has a resemblance to these substances, not being brown and hard, but of a soft consistence, and of a colour varying from brown to gray, red, &c.

XIV. *Statistic Note on the Matti Lunatic Asylum at Aversa, in the Kingdom of Naples.* By M. ESQUIROL.

BEFORE the establishment of the asylum, of which M. Esquirol has given some account in the Archives Générales de Médecine (Octobre), the lunatics of the kingdom of Naples were either confined in the general hospitals or in prisons. At Naples they were received into the Hospital of Incurables, where, as elsewhere indeed, they were badly lodged, badly clothed, badly fed, and badly treated,—abandoned by the physicians, and reduced to the most dreadful condition. But in 1813, the situation of these unfortunate beings was much ameliorated by an order of Ferdinand, king of Naples, for the removal and collection of all the lunatics in the kingdom to the little town of Aversa, about three leagues from the capital, where two convents were assigned for their reception, one for men, the other for women. In the opinion of M. Esquirol, the good which was done by this change would have been greater but for the singular monopoly exercised by the Chevalier Linguetti, who, not satisfied with being the civil governor of the establishment, put the physicians almost wholly aside, and not only regulated the house, but prescribed for the patients. Surely, even under the government of Ferdinand, the physicians (for there were six of them, and one of them was physician to the king) might have prevented this. Dr. Lastrillo, who was appointed in 1825, seems to have been rather more active; and it is from a communication made by him to M. Esquirol, in whose words we shall present what follows to the reader, that the particulars were collected.

‘ In fourteen tables drawn up by him, Dr. Lastrillo presents an account of the number of lunatics admitted during each month during ten years—from the 1st of January, 1814, to the 31st of December, 1823—with the age, sex, and temperament of the individuals; the causes, physical and moral, of their malady; the number of cures, relapses, and deaths. It appeared to me, that, although the perusal of so many figures, arranged in a tabular form, would not be very interesting, that observation would not apply to a comparison of the results as stated in each table, with the results which have been produced in other countries. I shall compare facts of the same class, observed in different climates, and among people submitted to a different education, of different manners and different modes of life.

‘ The number of admissions into the establishment at Aversa, from the 1st of January, 1814, to the 31st of December, 1823, was 1725. The mean proportion is $175\frac{1}{2}$ in each year. There was an increase in the admissions in 1822 and 1823. In 1814, there were but one hundred and fifty-one; in 1823, there were two hundred and twelve. This augmentation, which was even greater during last year, and is so during the present, is, without doubt, to be ascribed to the political events which have agitated and yet agitate the Neapolitan kingdom. The admissions are most numerous during the months of May, June, July, and August; and much less so during the winter quarter. This result accords with what has been observed in Paris and in London.

‘ Considering that the asylum at Aversa receives all the lunatics of the kingdom of Naples, the number of those admitted compared with those of France is very small. In general, there are much fewer madmen not only at Naples, but in the rest of Italy, and in Spain, and in the north of Europe, than in France and in England.

‘ In Naples there is an increase in the number of lunatics from the age of twenty to thirty, a period of life in which it is most common in both sexes: after the age of forty, the number is strikingly diminished. In France, after the age of fifty or sixty, madness is more frequent among women than among men; but the diminution at Naples, after the age of forty is gradual, and proportional in both sexes. At Naples, in the rest of Italy, and in Spain, men are more frequently the subjects of madness than women: of 1725 admitted, 1221 were men, and 504 women, or five of the former to two of the latter. In the southern parts of France, the number of male lunatics is almost equal to that of women; in the north of France, more women are affected than men; whilst in Russia, according to registers kept at Moscow and St. Petersburg, the men are to the women as five to four. It is, therefore, not merely to the difference of climate that we are to attribute this contrariety, since the number of men in the extreme north, and in hot climates, is greater than that of women. The true cause of the greater proportion of women affected with lunacy in France than in other countries, even than in England, is to be found in education and manners.

‘ The bilious temperament is more frequently concerned than any other in disposing to insanity in Naples : a particularity sufficiently explained by the predominance of the hepatic system, and the frequency of bilious affections observed in hot climates. Out of 1299 lunatics, whose occupation was noted, 317 were labourers and men working in the fields—a circumstance which must perhaps in part be attributed to exposure to the sun ; insolation, however, is only marked twice in the table of physical causes. The number of married and unmarried are nearly equal, although in France the majority of lunatics are persons in a state of celibacy : this is ascribable to the national manners.

‘ Insanity is much more frequently produced in Naples, as well as in France and England, by moral than by physical causes.

‘ The author of the registers, of which I am giving an account, has only noticed twenty instances of hereditary insanity, eighteen among the men, and two among the women. This small number is so disproportioned to that observed in France, England, and Germany, that there is most probably some mistake here, arising perhaps from those who were charged to take an account not being aware of the importance of this circumstance. Relations, and those who accompany the patients to asylums, are not always well informed of, or they dissemble, preceding events. If it be really the case that hereditary insanity is so rare in the kingdom of Naples, the attention of the physicians of other countries should be drawn to the fact, and to the cause of so great a difference between what is observed there, and in France and England. Such an inquiry would be of the highest interest, not only to the physician, but to all who regard the perfection of society ; for it is to prejudices and customs that the frequency of hereditary insanity with us, and in England, is to be attributed. For instance, alliances between relations, by debilitating the constitution, predispose to many infirmities which favour the development of insanity.

‘ At Naples, insanity is often a consequence of severe fevers, of cerebral fevers, and particularly of malignant intermittents ; diseases which are more frequent and more serious in those countries than with us.

‘ Among the moral causes of insanity, love is noted in about a dozen of the cases : this passion is less fatal with us ; for a long time past, love has neither killed people in France nor driven them mad. Vanity, pride, and ambition, are the tyrants which, both in Naples and France, often subjugate human reason.

‘ Of all species of insanity, monomania is the most common : of fourteen hundred and thirty lunatics, eight hundred and forty-three are monomaniac ; four hundred and twenty-five had monomania, with excitement ; and four hundred and eighteen were melancholic. The maniacal cases often commence in May and June ; they are more frequent in July and August. Monomaniacal cases appear in June, continue during July and August, and are most numerous in September and October. Of all the kinds of insanity, mania is the most frequently cured.

'The number of patients cured is three in ten of the male, and five in seventeen of the female patients: with us, and in England, the cures are more numerous. According to a general register kept at the Salpêtrière and the Bicêtre, the proportion of cures is two in five, and this is in patients whose state is the most unfavourable; in more favourable circumstances, the cures are as one to two. The cures increase in September, continue in October and November, but are more frequent in the month of April. We are struck with the conformity of these results to what any one may ascertain to be the case in France.

'In 1819 and 1820 the cures at Aversa were more frequent than before or since. The same was observed in France in 1814, 1815, and 1816. There were numerous accidental cases of insanity occasioned by fear, arising out of the events which harassed both countries at those periods.

'In the course of ten years, out of five hundred and seventy-eight cures, there were ninety-two relapses; seventy-three in the men, and nineteen in the women, or about one-sixth. Relapses are less frequent in France, being about one-fifth among the men, and one-tenth among women. Both at Aversa and in Paris, men are more frequently the subjects of relapses than women.

'The mortality at Aversa is nearly equal in both sexes, being a little more than one-fourth. It is much less in France, being only one-ninth in men, and one-sixteenth in women, or one-thirteenth for both taken together. As with us in France, the mortality is greatest in the winter months; in November, December, and January, there were two hundred and seven deaths; in the nine other months, five hundred and twenty-nine. The mortality is least in May, June, and July. In 1816 the mortality was very great, the number of deaths being one hundred and sixteen; whilst the mean number of deaths for ten years was only fifty-three: an epidemic typhus prevailed during that year, and did not spare the lunatics; affording another proof that patients of this description are not so insensible to atmospheric and epidemic influences as has been frequently asserted.

'Fourteen years ago, I said that half of the lunatics who died were paralytic. Innumerable facts collected since, far from weakening that assertion, have strongly confirmed it, particularly as regards men. It is lamentable to see the great number of paralytic men in all the establishments for lunatics. The circumstance is strongly remarked, when we compare the Bicêtre and the Salpêtrière,* or the male and the female wards of Charenton. I am assured by the principal physician of the institution at Aversa, that, in that establishment, where there are at present six hundred patients, scarcely a paralytic patient is to be found. It would be interesting to ascertain the cause of this striking difference between the two countries.'

* At the Salpêtrière, female patients only are received; the Bicêtre is wholly allotted to men. Both male and female lunatics are admitted at Charenton.—Ed.

XV. Death of M. Pinel.

THE celebrated Pinel, to whose work on mental alienation is to be ascribed in a great measure the commencement of the mild and judicious treatment of lunatics in many countries of Europe, closed his earthly career on the 25th of October, at the advanced age of eighty-two. He was Honorary Professor of Medicine to the Faculty of Medicine of Paris, Chief Physician at the Salpêtrière, Member of the Royal Academy of Sciences, and of the Royal Academy of Medicine of Paris, a Chevalier of the Order of the Legion of Honour and of St. Michael, &c.; and, above all, distinguished for his knowledge of mental disorders, and his long services as a clinical lecturer. His funeral was of course attended by deputations from the learned bodies of which he was a member; and several funeral discourses were pronounced, after the manner of our neighbours, over his grave. M. Geoffroy St. Hilaire spoke for the Institute; M. Parisot, for the Academy; M. Rostan, for the physicians at the Salpêtrière; and M. Andouard added his tribute of praise as a pupil. It is added, that the Faculty of Paris alone had no representative; but M. Cruveilhier, observing what some of the French journals indignantly call 'this scandalous omission,' pressed through the crowd, and spoke as follows:—

'No, Pinel! the Faculty of Medicine, for which thou didst so much, of which thou wast so great an ornament, shall not alone remain mute beside thy bier. Doubtless a voice more distinguished, a voice known to thee, should speak for it on this sad occasion; but thou wilt not disdain the spontaneous expression of a common grief, offered at thy tomb by the youngest of thy colleagues: even this is a title to the performance of this pious duty, since he belongs to the generation for which thou hast reduced to order the chaos of internal diseases, and explored the more difficult labyrinth of mental maladies. Many voices have celebrated the eminent services which thou hast done to science and to humanity; many voices have already proclaimed thy name, as fixing a memorable epoch in scientific annals. Alas! too long hast thou belonged only to posterity. Witness these learned deputations from bodies which thought it an honour to them that thou wert among their members; witness this countless and eager crowd of physicians, pupils, and friends, who are proud to have been formed in thy school, and who declare thy great knowledge, thy profound sagacity, thy eminently philosophical mind, and yet more the qualities of thy heart, a heart capable of feeling all injury, but incapable of retaining the memory of it. Above all, witness the yet more touching spectacle of this concourse of women who were confided to thy care, and who, regardless of the inciness of age, distance, and an inclement season, come here, weeping as for a father, that they may give thee a last adieu, and place a flower upon thy tomb!

'After such a homage, what can mere words express! or what could I add to the eloquent discourses in which we have just heard all the extent of our loss! Adieu, then, Pinel! best of men! thou

shalt always be regarded by us as the model of a true physician; and the memory of thy virtues shall ever be associated in our hearts with the memory of thy glory.'—(*Biblioth. Méd.*)

XVI. *Samuel Cooper's Dictionary of Surgery.*

It gives us pleasure to learn, that the latest edition of this valuable work has been translated into French, and published in Paris. The French reviewers have spoken of it with just commendation, though they make some slight exceptions to the style, for which we cannot but think the translator is wholly accountable. Speaking of the author's and of Mr. Brodie's opinion, that in *white swelling* the affection begins with ulceration of the cartilages, and gradually extends to the osseous tissue, they observe (*Biblioth. Méd.*) that this opinion has been recently refuted by MM. Cruveilhier and Gendrin, who have established the opinion that the primitive seat of the malady is in the synovia, and that the cartilages are inorganic parts, which may be worn, but cannot be inflamed or ulcerated. We imagine something more is necessary than the French reviewers suppose, before this opinion can be considered as established. The French critics further remark, on the article *Callus*, that they are surprised to find no mention made by Mr. S. Cooper of the experiments of M. Cruveilhier, which were much anterior to those of M. Breschet, noticed by him: and the same surprise is expressed, that the author should not have been acquainted with the not less curious experiments of M. Cruveilhier on *Necrosis*.

Considering the great size of the work, and the immense number of subjects of which it treats, embracing indeed the whole range of surgery, we cannot feel surprise at such omissions as these; at the same time the suggestions of the reviewer may be worth attending to, and the opinion advanced on the subject of white swelling will, we dare say, not remain unnoticed.

XVII. *Medical Intelligence.*

THE Medical Society of Lyons offers a prize for the best essay upon *colica pictonum*. The prize, a gold medal, or three hundred francs.

'Every latitude is afforded to the candidates, that the question may be treated completely. There are some points, however, yet undetermined, and which will deserve particular attention.

'1. Is it necessary for the production of this disease, that the exciting cause should act immediately on the digestive apparatus? or is it sufficient that it should be applied to the skin and the air passages?

The principal object of this question is the opinion emitted by some physicians, that purgatives benefit by expelling the metallic particles.

'2. What are the characters distinguishing *colica pictonum* from other species of colic?

‘ 3. What are the elementary tissues of the intestines more particularly affected? in what manner is their action altered?’

‘ 4. To explain the different modes of treatment employed, and to state the method indicated by theory and confirmed by experience.’

A similar prize is offered for the best essay on rachitis.

‘ 1. To determine, by the results of morbid anatomy and chemical experiment, the true character of rachitis.

‘ 2. To inquire from experience whether its progress is uniform, and if there are any essential phenomena peculiar to it?

‘ 3. Supposing there is any thing essential, to indicate its symptoms and its diagnosis from other affections, particularly scrofula.

‘ 4. To establish the best mode of treatment.’

The essays are to be sent, carriage-paid, before the 1st of June, 1828, to the secretary of the society, M. Pichard, Rue de la Monnaie, No. 12.

The Royal Society of Marseilles offers a prize of three hundred francs, to be awarded in 1827, for the best essay on the following question:—

‘ What is the actual state of our knowledge upon the primitive diseases of the genital organs, commonly deemed syphilitic?’

‘ To decide the affections and the period in which mercury is useful, useless, or injurious.

‘ To determine the general and local treatment after which secondary symptoms most rarely occur in a temperate climate like that of France.’

To be addressed, before July 1, 1827, to M. Roux, Rue des Petits Pères, No. 11.

The Academic Society of Marseilles offers a gold medal, or 300 francs, for the solution of the following question:—

‘ To decide, by clinical observation, what are the signs by which the different phlegmasiæ of the mucous tunic of the intestinal canal can be distinguished from each other; indicating more particularly their seat, their varieties, and especially the degree of analogy with the eruptive diseases of the skin.’

The essays to be sent before March 1st, 1828, to M. J. Orremond, secretary, Rue de la Salle, No. 1.

University of Glasgow.

‘ REGULATIONS RESPECTING DEGREES IN MEDICINE AND SURGERY.

‘ MEDICINE.—I. Every candidate for a medical degree must bring evidence that he has reached the age of twenty-one.

‘ II. He must bring evidence of having attended for four years some university in which medicine is regularly taught, or the

lectures delivered in the theatre of the College of Surgeons, Dublin; or those delivered in London: one of these years, at least, he must have attended the University of Glasgow.

‘ III. He must produce certificates of having attended the following medical classes in the above-mentioned schools—each course being reckoned to last during six calendar months, viz.

- ‘ Anatomy, during two such courses.
- Chemistry, during two such courses.
- Institutions of Medicine, one such course.
- Practice of Medicine, one such course.
- Materia Medica, one such course.
- Midwifery, one such course.
- Surgery, one such course.
- Botany, one course in a university.
- Infirmary, during twelve months.

‘ N. B. Two London courses of between three and four months each to be reckoned equivalent to one six months’ course.

‘ IV. Each candidate for a medical degree must announce his intention, and lodge the requisite testimonials with the youngest member of the medical faculty in the university, two months before the time of graduation; that is to say, by the 1st of March and the 1st of June, otherwise he cannot be taken on trials till the following year.

‘ V. Every candidate for a medical degree shall undergo three examinations:—the first on anatomy and physiology; the second on chemistry and pharmacy; and the third on the practice of medicine. He shall likewise write a Latin commentary on an aphorism of Hippocrates, and a medical case.

‘ VI. The degrees shall be conferred on those candidates who have acquitted themselves to the satisfaction of the examiners, on the last Wednesday of April, and the first Wednesday of August in each year, and at no other time.

‘ *Surgery.*—The curriculum of students who mean to take degrees in surgery to be three years; during which period they must attend the following courses of six months each, or the equivalent London courses as specified in the case of physicians, viz.

- ‘ Anatomy, two courses.
- Surgery, two courses.
- Chemistry, one course.
- Institutions of Medicine, one course.
- Practice of Medicine, one course.
- Midwifery, one course.
- Materia Medica, one course.
- Infirmary, during twelve months.

‘ One of the years of attendance, at least, must be in the University of Glasgow. The degrees in surgery to be conferred only on the last Wednesday of April.

| | |
|---|---------------|
| ' The fee to library, &c. for the degree of M.D. is | £15 |
| The duty on stamp for ditto | £10 3 |
| | <hr/> £25 3 |
| The fee for the degree of Chirurgiæ Magister, is | £10 10 |
| ' University, Glasgow, 17th April, 1826.' | |

There has been, for several years past, a most commendable spirit of exertion about the University of Glasgow, visible in every department of learning professedly taught there; and we believe we are correct in saying, that one of the effects has been a considerable increase in the number of students. Part of this effect must, however, in fairness be ascribed to a succession of very eminent private lecturers. If we did not feel it requisite to confine our remarks to those branches of collegiate study connected with medicine and surgery, it would be easy to shew, by alluding to the manner in which several other chairs are filled at Glasgow, that every opportunity is afforded in that University of gaining the acquirements of a scholar. We do not profess to be exactly acquainted with the changes that have taken place in the last year or two, any further than they are indicated in the preceding regulations, (for which we have to thank an able correspondent, whose contributions have frequently appeared in the *REPOSITORY*); but it may suffice to mention, that the chair of anatomy is filled by Dr. Jeffray, that of chemistry by Dr. Thomas Thomson, that of midwifery by Mr. Burns, and that of botany by Dr. Hooker. The effect of the recent regulations will doubtless be that of raising the standard of information required from the candidates; the time to be spent in study is lengthened, whilst the number of classes to be attended is, we believe, diminished; so as to make it evident, that the *Senatus* has thought more of the advantage of the students than of the professors.

The regulation by which three examinations are rendered necessary, each on different branches of medical science, is doubtless very judicious. These examinations are, we believe, in English. It is curious to see with what difficulty incorporated bodies throw off any venerable absurdity, for such we cannot but account "a Latin commentary on an aphorism of Hippocrates, and a medical case." For the rest, we see nothing that calls for particular remark.

The formation of a respectable medical society, and access to a well-ordered medical library, were, when we were at Glasgow, evidently much required; but it is very probable that these objects have not been overlooked.

Regulations of the University of Pennsylvania.

THE laws of the University of Pennsylvania exact, as necessary conditions for obtaining the degree of Doctor of Medicine, that the candidate shall have attained the age of twenty-one years, shall have applied himself to the study of medicine three years, two of which shall have been in the University, shall have attended one

course of elemental instruction, either in the Pennsylvania Hospital, the city alms-house, or in some other suitable place, at the discretion of the medical faculty; and also have attended the practice, and been the private pupil of some respectable practitioner.

It is, moreover, enjoined,

‘ That no person shall be admitted as a candidate for the said degree, unless he shall have regularly attended two complete courses of the lectures of

‘ The Professor of Anatomy,

‘ The Professor of the Institutes and the Practice of Physic, and Clinical Medicine,

‘ The Professor of Surgery,

‘ The Professor of Materia Medica,

‘ The Professor of Chemistry,

‘ The Professor of Midwifery.

‘ Each candidate for the degree of Doctor of Medicine shall, on or before the 10th of March of the year in which he offers himself as a candidate, and one week before the time appointed for his examination, deliver to the dean a thesis of his own composing, on some medical subject, which subject shall have been approved of by the professors. The candidate shall then be examined privately by the professors upon the various branches of medicine, and upon his thesis, in the presence of such of the trustees as may choose to attend, notice of the time of examination having been previously given to them. If he be found qualified, he shall be reported by the dean to the provost, who shall communicate such a report to the trustees, in order that, if approved of by them, their mandamus may be issued for conferring the degree at such a time as they may judge expedient; but no degree shall be conferred, unless ordered by a mandamus signed by thirteen trustees.

‘ The thesis may be published, if the candidate desires it, the permission of the professors by whom he was examined thereon having been first obtained: but no alteration therein shall be made after such permission shall have been given, and a copy of the thesis shall be deposited by the candidate composing it in the University library, before the degree shall be conferred.

‘ Medical students who have attended one complete course in a respectable medical school, where the attendance on two complete courses is necessary to a degree, and where the same branches are taught as in this school, may become candidates for a degree after attending one complete course of the professors above mentioned.’

Clinical Report of the most prevalent Diseases during the preceding Month.

DECEMBER has been unusually warm and open. Frost has occurred once or twice, but has not lasted more than twenty-four hours.

Fever still continues prevalent, but not more fatal. The symptoms, upon the whole, appear milder. Pulmonary complaints have

not increased either in number or severity during the present month, and have much more readily yielded to medical treatment than commonly happens at this time of the year.

The case of aneurism mentioned in the last report, terminated fatally, a few days ago, from effusion into the chest. The aneurism was situated, as we had suspected, in the arch of the aorta, between the arteria innominata and left subclavian. We shall probably give a more minute description of the aneurism in the next Number.

The case of diabetes is rather improved.

LITERARY INTELLIGENCE.

To be published on the 1st of February, with numerous engravings on wood, Dr. Arnott's work on General and Medical Physics.—It is a system of Natural and Experimental Philosophy, with strictly scientific arrangement, but made easily intelligible to those who have never learned or who have forgotten the Mathematics. In addition to a great mass of illustrations from general nature and the arts, adapted to the present more comprehensive scale of a liberal education, it comprises many very interesting particulars, furnished by examination of the Animal Body, under health, disease, and medical treatment, and among these there are new disquisitions and suggestions.

In the press, a new edition of Meteorological Essays, by J. F. Daniell, Esq. F.R.S.—This edition, besides the former essays upon, I. the Constitution of the Atmosphere; II. The Construction and Uses of a New Hygrometer; III. The Radiation of Heat in the Atmosphere; IV. The Hourly Oscillation of the Barometer; V. The Climate of London, with Corrections and Additions,—will comprise Essays upon the following subjects:—VI. Evaporation, as connected with Atmospheric Phenomena; VII. Artificial Climate, considered with regard to Horticulture; VIII. The connexion between the Oscillations of the Barometer at distant places; IX. The Insinuation of Air into the Torricellian Vacuum, and the means of preventing the gradual deterioration of Barometers. It will also contain various Meteorological Observations and Remarks, and numerous Tables, Plates, and Diagrams.

Dr. Forbes has in the press, and nearly ready for publication, a Translation of the second edition of Laennec's Treatise on Diseases of the Chest, with Notes and a Memoir of the Author's Life by the Translator.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. Observations upon the Autumnal Fevers of Savannah. By W. C. Daniell, M.D.

Of this little work, which appears to contain some original views of the nature of the fevers treated of, and of the practice required in them, we shall take some notice in our next Number.

2. An Introductory Lecture on Anatomy; delivered at the New Medical School, Aldersgate Street, October 2, 1826. By Frederick Tyrrell, Surgeon to St. Thomas's Hospital, and to the London Ophthalmic Infirmary.

3. Obstetric Plate. No. I. This Plate represents a Fœtus in Utero, enveloped in the Membranes, at the Seven and a half Month of Gestation, with the Placenta attached to the Body, Cervix, and Os Uteri, as taken from the Subject Thirty-six Hours after Death. By George Jewel, Surgeon; Lecturer on Midwifery, &c.

4. An Introductory Lecture on Human and Comparative Physiology, delivered at the New Medical School, in Aldersgate Street. By Peter M. Roget, M.D., F.R.S., &c. London, 1826.

THE METEOROLOGICAL JOURNAL,

From the 20th of NOVEMBER, 1826, to the 18th of DECEMBER, 1826.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50 High Holborn.

| November. | Moons. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|-----------|--------|-------------|--------|------|------|--------|---------|------------------|---------|--------|---------|------------------|--------|---------|
| | | | 9 A.M. | Max. | Min. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 2 P.M. | 10 P.M. |
| 20 | | | 44 | 47 | 42 | 30 | 24 | 30 | 33 | 85 | 93 | NE | NE | Cloudy |
| 21 | | | 45 | 46 | 40 | 30 | 35 | 30 | 33 | 75 | 86 | NE | NNE | Cloudy |
| 22 | ☾ | | 44 | 46 | 43 | 30 | 27 | 30 | 17 | 77 | 81 | N | N | |
| 23 | | | 44 | 49 | 43 | 29 | 97 | 29 | 76 | 93 | 88 | NNE | NE | sRain |
| 24 | | | 45 | 47 | 32 | 29 | 41 | 29 | 31 | 90 | 80 | WSW | WSW | Fine |
| 25 | | | 38 | 42 | 28 | 29 | 08 | 29 | 11 | 74 | 89 | WSW | WSW | Fine |
| 26 | | | 31 | 36 | 30 | 29 | 21 | 29 | 40 | 75 | 83 | WSW | W | Fine |
| 27 | | | 33 | 37 | 32 | 29 | 60 | 29 | 64 | 83 | 88 | W | SW | Foggy |
| 28 | ☉ | | 35 | 48 | 47 | 29 | 68 | 29 | 43 | 91 | 96 | WSW | SW | s Rain |
| 29 | | | 48 | 50 | 43 | 29 | 28 | 29 | 31 | 87 | 93 | SW | SW | Fair |
| 30 | | | 46 | 48 | 36 | 29 | 28 | 29 | 40 | 94 | 94 | WSW | W | Cloudy |
| 1 | | | 45 | 46 | 39 | 29 | 33 | 29 | 13 | 93 | 97 | WSW | WSW | Rain |
| 2 | | | 42 | 47 | 39 | 29 | 10 | 29 | 10 | 87 | 87 | WSW | W | Fair |
| 3 | | | 40 | 45 | 34 | 29 | 29 | 29 | 31 | 84 | 85 | W | W | Cloudy |
| 4 | | | 37 | 39 | 35 | 29 | 31 | 29 | 61 | 88 | 82 | WNW | NW | Cloudy |
| 5 | | | 40 | 41 | 33 | 29 | 62 | 29 | 56 | 84 | 89 | NW | NW | |
| 6 | ☾ | | 36 | 50 | 50 | 29 | 60 | 29 | 62 | 98 | 98 | ESE | SSW | Rain |
| 7 | | | 52 | 44 | 47 | 29 | 50 | 29 | 33 | 99 | 98 | WSW | SW | Rain |
| 8 | | | 50 | 52 | 42 | 29 | 20 | 29 | 45 | 90 | 88 | SW | W | Cloudy |
| 9 | | | 42 | 48 | 47 | 29 | 76 | 29 | 73 | 92 | 97 | W | S | Cloudy |
| 10 | | | 52 | 54 | 49 | 29 | 74 | 29 | 89 | 99 | 97 | SSW | S | Rain |
| 11 | | | 52 | 53 | 46 | 29 | 73 | 29 | 80 | 98 | 95 | SSW | SSW | Rain |
| 12 | | | 50 | 51 | 44 | 29 | 71 | 29 | 46 | 95 | 94 | S | SSE | Fair |
| 13 | | | 48 | 52 | 43 | 29 | 48 | 29 | 49 | 97 | 97 | SW | SW | Fair |
| 14 | ☉ | | 46 | 50 | 45 | 29 | 49 | 29 | 52 | 91 | 92 | SW | S | Foggy |
| 15 | | | 47 | 49 | 45 | 29 | 53 | 29 | 50 | 90 | 97 | SE | E | Cloudy |
| 16 | | | 47 | 49 | 44 | 29 | 47 | 29 | 60 | 98 | 97 | E | E | |
| 17 | | | 45 | 46 | 41 | 29 | 75 | 29 | 84 | 98 | 94 | E | ENE | Fair |
| 18 | | | 42 | 43 | 40 | 29 | 87 | 29 | 92 | 89 | 85 | E | E | |
| 19 | | | 42 | 44 | 40 | 29 | 92 | 29 | 94 | 87 | 90 | E | ENE | Cloudy |

The rain gauge having frozen, no account was taken of the quantity of rain fallen.

NOTICE TO CORRESPONDENTS.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

•• Communications, and Works for Review, are requested to be addressed (post paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

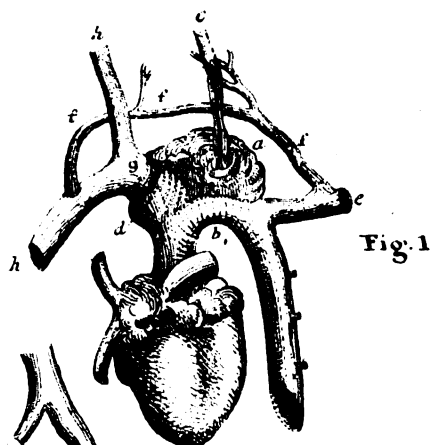


Fig. 1

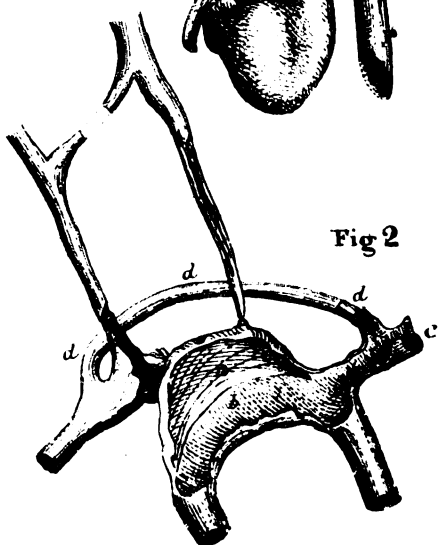


Fig 2

As H. Jost's Nucleus, lithography, 359. Strasul.

[illegible]

THE UNIVERSITY OF CHICAGO

REVIEW

1872, vol. 8, 1872, 1873

[illegible]

The first type of structure, or of those which have
 been produced in and by the process of
 the evolution of a solid structure, is the one in
 which the body is made up of two or more
 parts, each of which is a solid structure, and
 the whole is a solid structure. The second
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 is made up of two or more parts, each of
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 each of which is a solid structure, and the
 whole is a solid structure. The tenth type of
 structure is that in which the body is made
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 a solid structure, and the whole is a solid
 structure.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 158.

FEBRUARY 1, 1827.

VOL. XXVII.

No. XX.—NEW SERIES.—VOL. IV.

PART I. REVIEW.

I.

ON VERMINOUS DISEASES.

A Treatise on Verminous Diseases, &c. By VALERIAN LEWIS BRERA.
With Five Plates. Translated from the French, with Additions, by
JOHN E. COFFIN, M.D. 1816. Boston, 1817.

Mémoires, ou Recherches Anatomico-Pathologiques. Mémoire sur le Ténic et son Traitement. Par P. CH. LOUIS.

Anatomie des Vers Intestinaux Ascaride Lombricoide et Echennorhysique géant.
Par JULES CLOQUET. 1824.

THE subject of parasitic animals, or of those living beings which appear always to be produced in, and nourished at the expense of, animals of a superior structure, is of far too great extent to be comprehended in one or two papers of a medical journal. They who have never yet considered the matter will perhaps be surprised to learn that there are upwards of eleven hundred different species of these obscure beings, that there is no part of the animal organisation in which they have not been found, and that there are scarcely any symptoms of disease which have not at times been the consequence of their presence. That some errors may have occurred in the investigation, and that mere morbid structures may occasionally have been mistaken for a parasitic animal, is probable; but the allowances that might be made on this account are too small to make any material diminution in their number.

Of this immensity of parasitic beings, from fifteen to twenty

VOL. IV. NO. 20.—NEW SERIES.

O

only have their habitat in the human body, dispersed not only in the intestines, but the blood-vessels, brain, liver, bladder, and through almost every part of the animal organization. In the view we intend to give in this paper, we shall confine ourselves to the consideration of intestinal worms, the diseases to which they give rise, the best plan of expelling them from the system, and of removing the disposition to generate them.

The following are the only worms enumerated by Rudolphi, as occurring in the human intestines :

The *Tricocephalus dispar*, or long thread worm, principally occurring in the large intestines.

The *Ascaris vermicularis*, having its habitat generally in the rectum only.

The *Ascaris lumbricoides*, found for the most part in the stomach and small intestines.

The *Bothriocephalus latus*—*Tænia lata* of Linnæus, and the *Tænia solium*, or long tape worm. Both these worms reside in the small intestines.

The *Tricocephalus dispar* is mentioned by Rudolphi as *vulgatissimus*; and Bremser reports them as existing in almost every body he examined. Brera, on the other hand, though not perhaps the best authority, considers it rare; Dr. Barry, in a paper in the third volume of the Transactions of the King's and Queen's College of Physicians, says, that 'during a practice of twenty-four years he had not seen a single instance of this worm; and the reviewer of Bremser and Cloquet, in the North American Medical and Surgical Journal, states that specimens were very uncommon in the American collections. Baillie says, it is 'occasionally found in the great intestines of man, and more especially the cæcum.'

The *tricocephalus* is considerably larger and longer than the *ascaris vermicularis*. 'It is commonly from an inch to two inches in length, having the anterior two-thirds of the body thin, resembling a hair, and the rest much thicker. It is either white or coloured by the substances it has swallowed. The sexes are in different individuals. The female is smaller, and has the posterior and larger portion nearly straight. The male has the same part in a slight degree spirally twisted. The male possesses a penis, which protrudes from the larger extremity. The mouth is at the capillary end, which is always found adhering to the intestines.'

The *Ascaris vermicularis*, or *oxyuris vermicularis* of Bremser, is the well-known common thread worm, and exists almost exclusively in the rectum; sometimes, however, passing

into the vagina, and causing in either part the most intolerable itching.

The ascaris is of a white colour, and about an inch long. It is characterised by Rudolphi as a worm 'with an obtuse head, having vesicular membrane on each side. The anterior part of the body thicker, the posterior thinner; and in the male spiral obtuse; in the female, straight, and shaped.

These worms are always very numerous when present at all, and exist in large balls, consisting of thick mucus, in which probably they have their nidus. They are found principally in children; but there is no age in which they do not occur.

The *Ascaris lumbricoides*, or round long worm, has been lately examined by M. Jules Cloquet at great length. Dr. Baillie says it is rarely met with excepting in children; and the experience of most practitioners is, we believe, in accordance with this observation. Cloquet furnishes additional proof of its correctness by stating, that he scarcely obtained a single worm of this species from all the bodies which he opened at the Salpêtrière, where only adults are received,—while at the 'Hôpital des Enfants' he met with them in abundance: in one subject he collected forty-two.

Their principal habitat is in the small intestines, and when they descend into the cœcum they are very quickly expelled. We have met with them frequently in the stomach, and sometimes they rise into the air passages. They are not unfrequently drawn from the nostrils; one instance of which is reported by M. Cloquet; and we have met with several others in the course of our practice among young children. The lumbrici have passed also into the biliary ducts. M. Laennec found these ducts distended with lumbrici in an infant, whose stomach contained a large quantity of the worms. Indeed he goes farther, and says the tissue of the liver was eroded by them (*rongé par des vers de la même espèce*). This worm is said also to have been found in the pancreatic duct.

Sometimes they escape through openings of the bowels into the cavity of the peritoneum, many instances of which have been published. Whether the openings have been the result of the operations of the worm is still in doubt; ulceration appears always to have accompanied them.

The size of these worms is generally in an inverse ratio to their number: they are said by Cloquet to be always loose in the intestinal canal, and never to adhere to the parietes of the bowels.

In the human subject the *Ascaris lumbricoides* rarely exceeds twelve inches in length. Its diameter varies from

one line to two lines and a half, towards the middle of its body.

The sexes are in distinct individuals, and are recognisable without dissection. The males are always smaller, and much less common than the females. According to Cloquet the proportion of males to females is as one to four.

The body of the lumbricus is round, elastic, shining, and smooth, of a whitish colour, inclining slightly to yellow or red. It becomes narrower towards each extremity; but the anterior is the thinnest, and terminates abruptly by the three tubercles of the mouth. Of these, one is superior, and two inferior.

The posterior extremity of the body is terminated in a point. In the males it is spiral, and sometimes so much covered as to form a complete ring. In the female, it is perfectly straight.

The anus is found in both sexes at the extremity of the tail. In the female it is very apparent, in the shape of a transverse cleft, half a line in extent, and either straight or slightly curved. It is bound by two labia; the one anterior, and a little depressed; the other posterior, and more prominent.

In the male the anus is much less prominent, and is found at the caudal extremity of the abdominal groove: its anterior labium is slightly elevated by the penis, which is placed beneath.

The penis is sometimes enclosed in the intestinal canal; and at others, it issues from the anterior part of the anus. In this last case, which is very rare, it appears in the form of a simple, very delicate, conical, yellowish, transparent, and slightly curved appendix. The curvature is the same with that of the tail into which it is usually retracted.

The vulva of the female is situated about one-third of the whole length of the worm from the head. There is in this part a small circular contraction, about two lines in width, and in which the vulva is observable in the shape of a transverse cleft.

These worms are provided with a nervous and circulating apparatus.

Upon opening an *ascaris lumbricoides*, we find it filled with long white tubes, much convoluted, and surrounding the alimentary canal. In the male this is connected with the penis, constituting therefore the testicles and seminiferous ducts of the animal. In the female, tracing backwards from the vagina, we arrive at a comparatively wide tube, which, separating into two courses, terminate in convolutions much more numerous, but similar in appearance to those of the

male. These, therefore, are the uterus and ovaries of the worm.

The digestive canal is perfectly straight, extending from the mouth to the anus, but divided by Cloquet, on account of the manifest variations in its diameter, into œsophagus, stomach, and intestinal canal.

This is almost the only worm whose anatomical structure has been diligently investigated, and this has only been done within the last three years by M. Jules Cloquet, from whose labours the above account has been drawn. The plates in this volume are remarkably well done; and with regard to the lumbricus, we can testify to their accuracy. Of the other worms, we know little more than their external conformation.

The *Bothriocephalus latus*; *Tænia lata* of Linnæus; is thus described by Rudolphi:—

Head with oblong marginal depressions; neck nearly wanting: the anterior articulations in the form of rugæ, the next for some extent, almost square; the last elongated.

It is of very rare occurrence in England, Germany, and Holland. In Switzerland, Russia, and in France, Rudolphi says it is common. He had known no instance of its being found in the dead body. Both this and the next species are hermaphrodites.

Tænia solium. This is the common tape worm of this country, and is placed by Rudolphi among the *armatæ*. It has a subhemispherical head, with an obtuse beak. The neck full anteriorly. The anterior articulations very short; the next nearly square; the last oblong; all obtuse; and the marginal foramina widely alternating.

The length of this worm varies from a few feet to several yards; and it is with great difficulty entirely expelled from the intestinal canal.

Of the origin of intestinal worms, as indeed of all the parasitic animals, we are entirely ignorant; and an argument has been sought from this very ignorance in favour of spontaneous or equivocal generation. We have no intention of following up this part of the subject, but shall content ourselves with the following quotations from Mr. Brodie's introductory lecture at the College of Surgeons.

These same animals, when once called into existence, are endowed with the generative faculty, and bring forth young in the usual manner. Is it probable that the origin of the parents should be different from that of their offspring? Is it not more reasonable to conclude, that something respecting the production of these minute creatures is concealed from our view, than that they should be produced in a manner entirely contrary to analogy of what is observed in other beings endowed with life, when larger size makes

them more fit subjects of observation? It is not difficult to believe that their ova may be too small and insignificant to be cognisable by our senses: that they exist where their existence is not suspected; and that it is only when conveyed by accidental circumstances into a proper nidus that they give birth to the young animals.'

An attempt has been made by Dr. Barry, of Cork, to prove that the oxyures vermiculares are of external origin. He relates the case of a family who were much tormented by these parasites, and who supposed that they traced their production to drinking water from a well in which many small worms were present; and, excepting in colour, resembling the oxyuris. The coincidence must be allowed to be remarkable; but as no anatomical comparison was made between the worms of the well and those rejected by the human intestines, we can regard it only as a coincidence. As the well is probably still in existence, the examination may yet be made; and thus the real value of Dr. Barry's relation be most satisfactorily determined.

The symptoms which accompany the presence of worms in the intestinal canal are so exceedingly various, that there is scarcely a single disease which has not at some time or other been referred to their irritation. The disorders enumerated by Dr. Heberden, numerous as they are, are yet fewer than what actually occur. 'The maladies,' says this venerable author, 'which arise from worms, are, headach, giddiness, unpleasant dreams, sleep suddenly broken, with fright, and a loud cry, convulsions, fever, thirst, paleness, disagreeable taste, offensive breath, cough, dyspnœa, itching of the nose, pains in the stomach, nausea, delicacy in the choice of food, morbidly great appetite, emaciation, tenesmus, itching of the anus in the evening; and, lastly, the dejection of pellicles, and mucus.'

The symptoms, however, arising from different worms, though not very distinct, are yet sufficiently so to deserve enumeration. *Ascarides vermiculares* are, perhaps, upon the whole, the most common parasites of the human body, and are frequently found with *ascarides lumbricoides*. They are principally observable in very young children; very rarely, indeed, in adults. They are more frequent, however, in women than in men. The itching arising from these worms is almost intolerable; and if they are very numerous, they are accompanied also with distressing tenesmus. As, however, neither these, nor any other worms, are bred in an entirely healthy body, we have at the same time many constitutional symptoms. When *lumbrici* were present, we have more than once remarked that the dejections have been very bloody, and that the discharge of blood has ceased upon the expulsion

of the worm. To these are added very commonly the principal symptoms of marasmus, which do not cease upon the exit of the parasites from the intestines, but require attentive and continued medical treatment afterwards. Indeed these, and all other intestinal worms, are to be looked upon both as cause and as effect. They are the effect of a debilitated state of the animal economy; and by their irritation when once produced, they have a direct tendency to increase the pre-existing weakness.

The treatment of ascarides must have for its first object the expulsion of the worms, and for the next the correction of that state of constitution which has permitted their production: for the mere expulsion of ascarides, local remedies will frequently suffice, but will not prevent their reproduction. Repeated glysters, into whose composition some stimulating purgative enters, such as castor oil, Glauber's salts, &c., we can affirm from experience to be almost certainly effectual. Should, however, these more common glysters fail, injections made with oil of turpentine may be employed, and of considerable strength. The quantity of the oil must be carefully directed by the age of the patient; for it should never be forgotten that very young children are extremely liable to prolapsus ani, and that too powerful an irritant thrown into the rectum may induce this disorder. While these glysters are used as the local remedy, it will be advisable to give purgative medicines by the mouth, that the superior part of the intestinal canal may be cleared from all morbid secretions, or from any long detained feculant matter. The formation of scybalæ, and their long retention in the colon, is a frequent attendant upon all intestinal worms; while, at the same time, the continued and distressing tenesmus leads not very unfrequently to most erroneous practice. We have more than once mentioned this occurrence, and the mistake made both by patients and medical men of the symptom referred to for actual purging. Hence astringents are vainly, because improperly given; for most unquestionably nothing so soon relieves tenesmus arising from this cause, as completely purifying the intestinal canal; and though ascarides will cause this symptom to a very considerable extent, it is far more aggravated by the presence of scybalæ in any part of the tube. In truth, they frequently induce a state of chronic inflammation in the mucous membrane, and which ceases spontaneously as soon as the exciting cause is removed.

Still the most important part of the treatment remains when the bowels are cleared both of scybalæ and ascarides, for the previously weakened condition of the patient will perhaps have been rather increased than diminished by the

remedies that have been necessitated ; and if suffered to continue without aid, will inevitably permit the reproduction of ascarides. For this purpose, tonics of various kinds have been employed, united with aperients. The combination which we have found most successful has been an infusion of camomile with the compound decoction of aloës, or with infusion of rhubarb ; and we have generally given one or two grains of calomel every other night.

Camomile, we believe, to have a very beneficial effect upon the secretions, &c., of the bowels, and that it has a great tendency to overcome that state in which worms can be readily generated. The dose of the medicine must necessarily be directed according to the age and strength of the patient ; but care should be always had that two or three dejections should pass away daily. Removal into a purer air, should the individual reside in a town, is, we are convinced, a most efficacious means of recovery. It tends more than any drugs to the restoration of health ; and even should worms be produced, they will exhibit a much less injurious influence upon the general system : nevertheless, the employment of medicines ought to be continued till the evacuation become perfectly healthy, and till none of the slimy mucus can be discovered in the fœces, which there is much reason for believing to be the nidus of these parasites.

Of the symptoms which denote lumbrici, little has been certainly ascertained ; but they may always be suspected in children who suffer from marasmus, or who are known to have expelled ascarides. There is one indication, however, more frequently attendant upon the presence of this worm than of any other in adults, which was first mentioned as caused by verminous irritation, by Mr. Ramsey, of Beaconsfield. This is the occurrence of hæmoptysis. Mr. Ramsay has given several cases, where the expulsion of the worm was followed by the cessation of the hæmorrhage. He has quoted also some cases from Morgagni, in which acute pulmonary symptoms appeared entirely dependent upon the irritation of worms. We have in our own practice seen two cases of hæmoptysis in which lumbrici seemed to have been the exciting cause. One of these, an Irishman, after suffering for several weeks from profuse hæmoptysis, vomited a large lumbricus, and experienced no ailment afterwards. The other case occurred in a young girl of eighteen years of age, who had been badly fed, and was fatal. She had complained of phthisical symptoms for some weeks, as short, hacking cough, slight dyspnœa, &c., when she was suddenly seized with most profuse hæmatemesis, and died in a few minutes. Upon examination after death, the bronchi were found gorged

with blood, and the lungs studded with miliary tubercles. The stomach contained a considerable quantity of blood, together with eight or ten lumbrici of various sizes. They had not been suspected during the life of the patient.

It is manifest, that the recurrence of hæmoptysis will by no means justify us in concluding that there are lumbrici or any other species of worms present. At the same time, the knowledge that they may be an exciting cause, ought always to render us attentive in investigating the whole circumstances of the case. There are practitioners, and these not few in number, who affect to practise physic, as a retail shop-keeper deals out his goods, without giving themselves a moment's time for reflection. Should a patient complain of hæmoptysis to such individuals, bleeding, purging, and acids, are recurred to on the instant. They have all these remedies of hæmoptysis at hand. This sudden mode of decision has unfortunately its temptations. Confidence begets confidence; and the patient can scarcely think him wrong who seems nothing doubtful of his own clear acumen, and almost, we might say, intuition. Still, however, it is dangerous practice, and must always leave room for success to some more cautious, but less self-sufficient competitor. To young men just entering upon life, this is an important consideration; and they may be assured, that careful investigation of disease, though less imposing at first upon the public than presumptuous self-confidence and quick decision, is a far more secure mode both of obtaining and retaining reputation, upon which most certainly their final success in practice will be dependent.

In no disorders are such reflections more applicable than in the treatment of those that are caused by, or are accompanied with, worms, because the diseases which are simulated, are themselves among the most serious and incurable maladies.

Lumbrici, though thus frequently exciting very severe ailments, are, on all hands, allowed to be easily removable, compared with other intestinal parasites. It will generally suffice to administer tonics, with the occasional intervention of a brisk purgative. The oil of turpentine has been recommended for the purpose of expelling this worm. We are inclined, however, to believe that it is not very effectual; we are certain that it is very seldom necessary to recur to any peculiarly powerful remedies.

The last intestinal parasite respecting which we shall make some observations, is the *tænia solium*. The *bothriocephalus latus* is, we believe, altogether unknown in this country; and the *tricocephalus* has been so seldom met with, that we are

entirely ignorant both of its effect upon the animal economy, and of the peculiar means, if they are peculiar, by which it can be expelled.

M. Louis has reported ten cases of disease arising from the irritation of the *tænia solium*; and from these, together with the result of our own observations, we are enabled to expose in greater detail the extreme variety of symptoms which this excites.

The principal indications in these cases were colic, varied pains in the abdomen, *pruritus ani et narium*, more or less derangement of digestion and of the appetite and *gastrodynia*. Headach was unfrequent; but, on the other hand, there was great lassitude, and wandering pains in the limbs, frequently compelling the patient to suspend his occupation.

The most frequent symptom was pain in the abdomen, but of an extremely varied character. Sometimes there was simple colic; at others, there was pain in both iliac regions, and, like colic, intermitting and returning at intervals with renewed violence. There was diarrhœa in one case only, and this was in a woman with whom it had been habitual for four years. Though, however, this absence of diarrhœa marked nine out of the ten cases related by M. Louis, it is far from being uncommon. Occasionally we have known the diarrhœa attendant upon *tænia* very profuse, and productive of considerable prostration of strength; more frequently, however, we have observed nothing more than *tenesmus*. One remark we may make on this point before proceeding, and it is this, to wit, that neither diarrhœa nor *tenesmus* renders the exhibition of purgatives improper, if the strength of the patient will permit their employment. In fact, to purge an individual thus affected, is the surest method of removing his disorder.

After the abdominal pains, M. Louis found the *pruritus ani* the most frequent symptom. In three cases out of the ten it was wanting; and yet in one of these, great portions of *tænia* were daily passed, even without evacuation from the bowels.

Pruritus narium was wanting in three-fifths of the cases; and in one case only was it present without *pruritus ani*. The appetite was generally much greater than in health: in one instance there was no sensible change; and in some there were frequent alternations of anorexia and immoderate appetite.

Authors have laid down as one symptom of *tænia*, that the pain of the stomach is relieved by taking food; but in none of the cases we have treated, and they exceed some

hundreds, have we observed any alleviation follow; more generally the pain has been aggravated.

Pain at the epigastrium, in M. Louis's cases, was felt by the females only. In one case he attributed it to the remedies employed, as it remained after the expulsion of the worm; in the other instances no pain was experienced after the tænia had been removed.

Vomiting was noticed in only one of these cases, and had been more oppressive before portions of the worm had been perceived in the evacuations than afterwards.

Pains in the extremities, cramp, and lassitude, were very common; and the difficulty of moving themselves prevailed more than any other reason with patients to induce an application for assistance.

Rheumatic pains are, within our experience, a very common attendant upon the presence of tænia. But though there is every reason to believe that they are an exciting cause, the pain is nevertheless affected by every change in the weather. They exhibit, in short, all the characters of rheumatism when it is idiopathic. Both in the cases reported by M. Louis, and in those which have fallen under our own observation, the pains have entirely ceased upon the expulsion of the worm.

Emaciation is a certain consequence of continued irritation from any cause, and of course must be expected in diseases produced by worms. It varies, however, in extent very considerably,—in some, proceeding rapidly and extremely; in others, presenting a very slow progress, and unattended, as in the former case, by any very great prostration of strength.

M. P. Ch. Louis states, that in all the ten cases the pupil was in its natural state; and thence very properly infers, that the dilatation of the pupil, if a symptom at all, that tænia are present in the intestines, is not one of the most frequent. We do not recollect to have met with this dilatation ourselves in any case unaccompanied with some cerebral affection, and which has not always been overcome by expelling the worm. M. H. Cloquet, as quoted by Dr. Dunglison, considers dilatation of the pupil a very principal symptom, and mentions it before any other.

It is observed by M. P. Ch. Louis, that the females exhibited a greater variety of symptoms than the males; and we are inclined to believe that this is generally true. It is very certain, that the more sedentary habits of women leave them more leisure to examine all their sensations, and hence perhaps to be at least more accurate in relating them than men are. Hysteria is a very frequent symptom in women, and

probably aggravated by, if not originating from, worms. In truth, the greater variety of symptoms are entirely of the character of nervous diseases, to which at all times the delicate frames of women render them more liable than men.

In addition to the affections already enumerated, all the phenomena of phthisis pulmonalis are occasionally simulated by verminous irritation; and hence not unfrequently the success of quacks in curing consumption. They expel the *tænia*, and all the symptoms vanish. The coincidence of *tænia*, however, or of any other intestinal parasite, with pulmonary complaints, are by no means a proof that they are simply verminous disease. *Tænia* is a very common companion of tubercular phthisis; and the generation of the one, and the development of the other, we very much suspect to have the same original cause, viz. insufficient or innutritious diet. There is little question, but that if worms accompany tubercular disease of the lungs, that the progress of this last will be greatly accelerated: there will be double irritation.

Though all the phenomena above enumerated are frequently the consequence of worms in the intestinal canal, there has not been a single symptom mentioned by which we can ascertain that they have been generated. There is in fact no such symptom; and then only can we be certain that worms exist, when they have been discovered in the evacuations. The real use, therefore, to be drawn from the knowledge, that verminous irritation will give rise to simulated disease, is to render us attentive in examining what passes away from the bowels; and should portions of *tænia* be found, then, and not till then, to institute the treatment adapted for expelling them. The evil habit of attributing all emaciation, and affections attended with indigestion, to worms, has fortunately passed away in England; and it is scarcely necessary perhaps to caution against the employment of powerful remedies, which, though justified, when no doubt exists of *tænia* being present, are never given without inducing great disorder in the general system. We allude particularly to the exhibition of very drastic purgatives and oil of turpentine.

In discussing the treatment of *tænia*, we shall confine ourselves to the exposition of the modes generally practised in our own day, and to the relation of remedies, which, though seldom now employed, were formerly, if we may believe the reports of intelligent physicians, deservedly in high repute.

The essay upon *tænia* by M. P. Ch. Louis, has for its object the investigation of an anthelmintic potion of a M. Darbon; but the composition of which is not mentioned.

It was certainly successful in the cases reported in this essay.

The remedy itself is described as a brownish, turbid, and thick liquid, and imparting different tastes to different patients. With some it appeared rather bitter, like orange peel; to others it had no very decided taste. Its exhibition was followed by no uneasiness of the stomach; and in very few instances by any griping pains in the bowels,—but still these were very slight. In only one individual was there any nausea produced. The dose was from eight to ten ounces, and was given to the patient fasting.

In four or five hours after it has been taken, alvine evacuations have place, and are accompanied with more or less of the worm. In almost every case the head of the worm was discoverable, which, according to the report of authors, M. Cloquet says, is very rare. We rather believe, however, that the head has frequently passed away unperceived, from its very great minuteness. One dose generally sufficed to bring away the whole worm.

Four or five months after, a second dose was given, for the purpose of discovering if any of the worm should remain; but in no case was any more expelled; nor was this second exhibition of the remedy attended or followed by the slightest inconvenience. The symptoms, also, which had distressed the patients before the first exhibition of the medicine, had entirely disappeared, and health had been completely restored; circumstances that had never occurred after other remedies.

With respect to the manner in which this medicine acts upon the worm, we are in doubt. M. Louis always found the parasite dead; but M. Darbon assured him, that he had seen the *tænia* move after its expulsion, when placed in warm water. The author of the essay sums up his account of the new remedy, by stating, 'that none of the most celebrated vermifuge remedies acts so pleasantly and so efficaciously as this mixture; and that it combines the double advantage of certainty and safety.'

Oil of turpentine is now in England the remedy most frequently had recourse to for the cure of *tænia*: and it is reported by many individuals to be equally efficacious in the treatment of other intestinal worms. We have already, however, stated our doubtfulness respecting the latter opinion. The manner in which this medicine was introduced into practice, and the large dose that can be taken by numerous individuals, is too well known to require any dissertation upon this part of the subject. It is, however, unfortunately true, that though the most efficacious remedy with which we are

acquainted, there are many patients who cannot retain a large dose upon their stomachs; and in a small dose it has scarcely any effect upon the worm.

The usual plan of exhibiting this medicine is by mixing it with an equal quantity of milk, and giving it without preparation upon first waking in the morning. In this form, however, it is very frequently rejected; and under such circumstances we have sometimes been able to succeed in preventing sickness, by altering the plan of administering the oil. Our first care has been to purge the bowels well by cathartic extract, or the compound gamboge pill, fifteen grains of which, given every night, will be generally found sufficient. The oil of turpentine has been formed into a mixture with yolk of egg and mint water, in the proportion of two ounces of the oil to six ounces of the mint water; and an ounce and a half, or two ounces, of this mixture has been given every other morning. Care has been had, that it should be taken upon an empty stomach, and that the patient should remain quietly in bed for two or three hours afterwards. A remark has been made by Dr. Coffin, which we believe to be true, and to which attention unquestionably ought to be paid in exhibiting the oil of turpentine. He states, 'that the larger the dose is, the sooner it passes through the body, and the less is the chance of its being absorbed, and of thus incommoding the urinary organs.'

A new remedy has been tried successfully in India and in France, which appears to unite the advantages of the oil of turpentine with the safety and pleasantness of milder medicines. This is the bark of the root of the *punica granatum*, or pomegranate tree. A decoction of this bark, 'prepared with two ounces of fresh bark, boiled in a pint and a half of water, till but three quarters of a pint remain,' has, according to Dr. Ainslie, been long in use among the Mahometan physicians for the treatment of *tænia*. Dr. Fleming we believe to have been the first who called the attention of British practitioners to its properties; and we are indebted for additional and very valuable information respecting it to Mr. Breton, who has published a paper upon the subject in the eleventh volume of the *Medico-Chirurgical Transactions*. The first case in which he tried it was upon an attendant of his own, and it was given in decoction. Four glassfuls were taken at intervals of half an hour between each glassful; and about an hour after the last had been taken, an entire *tænia* was expelled alive. In this instance the medicine only occasioned a very slight degree of nausea.

Mr. Breton next tried the dried bark of the pomegranate root in decoction, and found it equally effectual with the

fresh bark. Four doses, of two ounces each, sufficed in this case for the expulsion of the *tænia*.

Lastly, he administered the bark itself in powder, in doses of twenty grains every hour, and with equal success. One of the cases presents additional interest, from the circumstance of a *bothriocephalus latus*, and a specimen of the *tænia solium*, being expelled within twenty-four hours of each other. According to Rudolphi, this is without example; and we could therefore have wished that Mr. Breton had described the structure of these two worms. Rudolphi's words are, 'Eundem hominem utroque vermæ laborasse exemplum non est.'

Mr. Breton has endeavoured to ascertain the *modus operandi* of the pomegranate root, by placing live *tænia* in the decoction and in a watery mixture of the powdered bark. He says, that 'the instant they were plunged in these preparations, they writhed, and otherwise manifested great pain, and died in the space of five minutes. In plain water these worms will live several hours after expulsion.' As, however, the *tænia* in several instances were alive when expelled, it is clear that these experiments have no tendency to explain its mode of action. We are not aware that it has yet been tried in this country.

Mercury has at times been celebrated as an anthelmintic, and without doubt it has occasionally been very effectual; more, however, in all probability, by correcting the intestinal secretions, than by any specific action upon the parasites themselves.

Among the vermifuge remedies that are now almost rejected from practice, none bore a higher reputation than stannum granulatum, or grains of tin. It seems to have been introduced into British practice by Dr. Charles Alston, formerly Professor of Botany and Materia Medica in the University of Edinburgh. His attention was drawn to it from 'an empiric receipt that came into his hands in the year 1719.' He was accustomed to give it in very large doses, always, however, preceding its exhibition by a brisk purgative the day before, so as entirely to empty the bowels. 'To full-grown persons,' he states, 'I give two ounces of the powder of pure unmixed or block tin, put through the finest hair sieve or search, mixed with eight ounces of the common treacle or molasses.' It has usually, however, been given in much smaller doses, and has been found to be more efficacious when coarsely rasped than in fine grains. It will probably be entirely excluded from practice, since the discovery of more certain remedies.

The *dolichos pruriens*, or cowhage, is another anthelmintic

of the same class with *stannum granulatum*. It was at one time much celebrated,—but, like the preceding remedy, will in all probability be entirely disused.

Bremser has recommended the external application of anthelmintic remedies, and maintains that they are capable of destroying worms. That oil of turpentine may be efficacious thus employed, appears not improbable; for it is well known that, when this substance has been well rubbed upon the skin, it is quickly discoverable in the urine, and even in the breath. We have known it employed with great success in that tympanitic state of the bowels which often succeeds to inflammation of the mucous membrane; and reports have been given to us in which it had speedily caused the abdomen to subside in some of those complaints which attend upon the puerperal state. Where there is any difficulty in administering remedies by the mouth, every well-informed practitioner would undoubtedly endeavour to effect his purpose by administering the proper remedies by means of friction.

It now only remains for us to point out the best method of preventing the reproduction of worms when they have once been expelled; but in this we have in great measure anticipated ourselves. We have already stated that these beings are never generated in a healthy system; and it would be an endless task to discuss at length the means of correcting such a state of the animal economy. No two cases will ever be exactly similar; and it must be left to the good sense of individuals to select the most proper remedies for those cases that are intrusted to their care. Let them only bear this fact at all times in their minds, that to expel the worm is but a small part of their task; and that unless they endeavour afterwards to restore the alimentary canal to a healthy condition, and thus render it an unfit habitat for the parasite, their labour must be equally hopeless, as most certainly it will be endless.

II.

ON THE PHYSICAL HISTORY OF MANKIND.

Researches into the Physical History of Mankind. By JAMES COWLES PRICHARD, M.D. Second Edition. In Two Volumes. London. 1826. 8vo. Pp. 544 and 623. Ten Plates.

FEW students of an intelligent character can have passed through their required anatomical labours, and have given even a moderate degree of attention to the physiological

questions presented in the course of them, without an occasional feeling of strong curiosity concerning the causes of the striking varieties into which human beings are divided, and without being at the same time sensible that the investigation of these causes must lead to the understanding of numerous laws to which the human frame is subjected. The necessity of attending to other investigations, of a nature more directly practical, may have limited their reflection to this point; but numerous circumstances must still occur in the ordinary course of every man's life, calculated to revive a desire to know something of the origin of diversities so frequently met with. With this inquiry, all who have prosecuted researches into the history of man have consequently set out; and the two volumes before us are but a persevering and learned attempt to answer it satisfactorily. At the first view, the peculiarities of different races of men are so striking, that many modern, as well as almost all Greek and Roman writers, have decided the question without any laboured investigation, and asserted the division of mankind into more or fewer *species*. Such an opinion has all the advantage of *primâ facie* probability; and it is much easier to entertain than to prove it to be false. Wherever enterprise or the resistless winds have carried the navigators of the old world, they have found not animals alone, but human beings, often in the state of a mere animal existence, ignorant of arts, uninstructed concerning their origin, and supposing themselves the only human beings in the world; expressing their very limited ideas by a peculiar language,—and altogether presenting at the first view the appearance of a separate creation of men, who inherit no comforts, nor any kind of knowledge, from any more civilised ancestors. When, in addition to these peculiarities, we take into consideration the wide varieties of colour, features, and form, which are met with in different parts of the earth,—‘the black colour, the crisp hair, and peculiar features and figure of the African negro;’—‘the singular physiognomy and proportions, as well as the various complexions of the bald and yellow Mongoles, the pot-bellied Samoiedes, and the red savages of America; the humps, and other well-known deformities of the Bosjesmen, and the hairy limbs and apish expression and figure of the Mallicollese,’—we cannot help regarding with complacency, and a willingness to believe, an hypothesis by which all these varieties are so readily, and apparently so satisfactorily explained. Thus the ancients adopted and maintained it; and those among the moderns who have been averse to the labour of inquiry. But if we admit the possibility, notwithstanding these first appearances, that ‘all the physical

diversities of mankind may amount only to varieties, and not constitute specific differences,' this can only be proved by a very ample survey not only of human beings in all their diversities, but of all the varieties of animals, and of the whole of organised nature; and, to use the words of Dr. Prichard, the inquiry resolves itself into the two following problems:—

' 1. Whether, through the organised world in general, it has been the plan or method of nature to produce one stock or family in each particular species, or to call the same species into existence by several distinct origins, and thus to diffuse it at once generally, without waiting for the slow method of propagation from a single root? In other words, whether all the organised beings of each particular species can be referred with probability to a common parentage?

' 2. Whether there is more than one species of men in existence? In other words, whether the physical diversities of the several races of men are such as have probably arisen by variation from one primitive type or form; or must, on the contrary, be considered as permanent characters, and therefore as constituting distinct species?'
—Vol. i. p. 10.

Of an inquiry so comprehensive, and demanding so much exactness, a very imperfect outline can of course alone be given in this notice, though perhaps sufficient to induce some of our readers to have recourse to the original work, in which they will find the numerous particulars which it was necessary to include presented to the reader with great clearness, precision, and elegance, and their bearing upon the general question which occupies the whole work satisfactorily established. The first problem leads Dr. Prichard to an investigation of the origin and mode of dispersion of plants and animals. It appears that, though the most simply organised tribes of plants are very widely dispersed, and the same species often common to distant regions, those of more perfect, or more complex forms, are confined to particular countries. The diffusion or limitation of plants is often to be accounted for by the structure and lightness of the seeds, and their capability of being transported by the winds, or suffering unharmed all the violence of the sea; and also by the prevalence of particular currents of the air or of the sea, by the presence or absence of mountainous barriers or other obstacles. The tribes of plants most generally dispersed are those which, by the nature of their seeds, are most easily diffusible; but the other tribes are found to be confined to a very limited sphere.

' It appears that regions situated under similar latitudes, and resembling in soil, temperature, and local circumstances, display in

general a certain analogy or correspondence in their vegetation; but the particular nature of this correspondence or resemblance, it is important to observe.

‘It may, I believe, be laid down as a general observation, that in very distant countries, where the physical circumstances are similar, the vegetation resembles, but that this resemblance does not consist in the identity of species. In many instances there is found in two such regions only a general analogy in the vegetable forms, certain families or genera in one replacing or appearing in the stead of similar tribes in the other, but the same genus not being common to both. In other instances, the genera of plants are more widely spread, and species very nearly approaching to each other have been discovered in separate countries. Thus, new species of pine, of beech, elm, alder, of the plane and cornel tree, of tilia and viburnum, are found in America, instead of the Asiatic and European species. The dwarf birch, which in Northern Europe occupies the highest tract in the borders of perpetual snow, is replaced in Tierra del Fuego by the *Betula antarctica*. There are some examples in which the identical species have been recognised in very remote countries; but, among perfect plants these instances are comparatively very few, and many of them admit of explanation.’—P. 27.

There is also in some instances a remarkable arrangement or distribution observed of plants in different parts of the earth, regulated ‘according to their natural affinities,’ particular natural families being placed in groups, each having a centre or focus where the genera and species comprised in it are in the greatest number. In small islands, remote from continents, the species are very few, and sometimes quite peculiar. Islands newly emerged from the ocean have often their peculiar plants, though akin to the genera of neighbouring continents. In some islands, although there are no inhabitants, and no animals except visitants, there are still some plants peculiar to them.

‘It appears then, on the whole, that the phenomena connected with this subject are reconcilable with only one hypothesis, and that is, that the vegetable creation was originally divided into a number of different provinces. Each country, perhaps each chain of mountains, had its peculiar tribes, which at first existed not elsewhere. This conclusion results from the facts we have pointed out; first, from the general difference in the species belonging to each of the great continents: a difference which is strongly marked, and almost without exception in respect to those tribes of dicotyledonous plants which constitute the chief mass of the vegetation in each country, and which by the nature of their seeds, or their habitation at a distance from the sea coast, are removed from the chances of transportation. Secondly, from the arrangement of whole dynasties of gregarious plants round some particular foci, the individual species being spread out in various directions with reference to the central

point. The same conclusion is further supported by the observation that some particular plants have an entirely local and insulated existence, being found naturally on some particular mountain, and never elsewhere. The cedar of Lebanon, and the *melastoma setosum*, which grows on the volcano of Guadaloupe, have been cited as examples of this description, as well as the *disa longicornis*, and the *serapias tubularis*, which were found by Thunberg on the Table Mountain, near the Cape, and have never been observed in any other place. It is impossible to reconcile these facts with any other hypothesis than that which supposes the vegetable creation to have taken place from distinct centres, each of which was the original seat of a certain number of peculiar species.—Vol. i. p. 39.

With a few exceptions, insects and reptiles are confined to particular countries, often limited by boundaries which they are unable to pass, as seas, mountains, &c., and are not found to be the same in separate countries of which the climates are analogous. They seem, particularly the insects, to follow the same rules as those which govern vegetables: the entomology of America approximates to that of the Austral countries: the insects of New Holland are often of the same genera with those of the Moluccas and South Eastern parts of India; but yet the entomology of New Holland has a peculiar type. Again, with respect to birds, notwithstanding some exceptions, as, for instance, the vulture, particular species are confined to a very limited range. The same law seems to apply to marine animals, although this department of zoology is in a very incomplete state; and statements of a contrary nature have often been erroneously advanced. As regards quadrupeds, the fact of their being confined in species to geographical districts, is particularly well established; and the same circumstance is without difficulty ascertained to exist with respect to reptiles; and the division of the species in both these classes is for the most part effected by branches of the ocean, intersecting continents or separating islands. By the particular approximation of the continents of the Old and New World towards the north, animals are enabled in the winter season to pass from one to the other, and the Arctic region contains tribes of animals common to both.

‘But the temperate zone to the northward of the equator is divided by the ocean into two great districts. The temperate region of Asia and of Europe affords a practicable passage for animals from Europe as far as the shores of the North Pacific. This ocean, however, sets an impassable barrier: accordingly the same tribes are found to be spread from the western to the eastern countries in the old continent; but the quadrupeds which inhabit a temperate climate in America are peculiar races.

‘The equatorial region contains three extensive tracts, separated

from each other by wide seas. I allude to the tropical parts of Africa and of America, and to continental India. Accordingly there are three distinct nations of tropical quadrupeds, viz. the American, the African, and the Indian.

'The Indian isles, particularly the Sunda and Molucca islands, which are separated from the continent of Asia, may be thought, by their geographical situation, to form a distinct region. In fact, they contain many peculiar tribes of animals different from those of the Indian continent, and in some respects approaching in their general character to the African tribes.

'Beyond the Indian archipelago we find a remarkable country, extremely fertile in vegetable productions. It is termed, from the inhabitants, Papua, that name including New Guinea, New Britain, and New Ireland. This continent, for such it may be called, with the islands which are formed by a continuation of its mountain chains; viz. the Archipelago of Solomon's Islands, the New Hebrides, and Louisiade, together with the more remote groups of isles in the great Southern Ocean, may be considered as forming one zoological province. It is remarkable, that all this extensive region seems almost wholly destitute of native warm-blooded quadrupeds, except a few species of bats, and some small domesticated animals in the possession of the natives.

'Beyond this region, upon which, though appearing well fitted to be the receptacle of numerous races, nature has refused to bestow any four-footed inhabitants, we find, what is, on this account, the more remarkable, an extensive country containing many indigenous tribes of very peculiar description. In no part of the world has the animal creation so distinct and singular a character as in *Terra Australis*.

'The southern extremities of America and Africa contain countries situated under a temperate climate, nearly insulated, as respects the quadrupeds inhabiting them. These regions, as we might expect, contain peculiar tribes.'—Vol. i. p. 54.

Into the general survey of the tribes inhabiting the above provinces of the animal world, we cannot of course follow the author. It appears that in small islands, remote from continents, there are generally no land quadrupeds, except such as have been conveyed by men: 'dogs, hogs, rats, and a few bats;' and that the quadrupeds found on islands near continents generally form part of the stock of the main land, with which, from what is recorded in several instances, it is probable that the islands were at some remote period connected. When the same genus of animals is met with in countries remote from each other, the species is not the same. And from a survey of the dispersion of animals, it is manifest that the various tribes were not spread over the earth by chance, but that particular kinds originated in regions to which they were adapted; and many entire genera, as well as particular species, are wholly confined to certain

districts. No great department of the world exists so separate from the great continents as Terra Australis, and none has so peculiar a stock of animals. A numerous tribe of monkeys inhabiting the new world, the sapagons, are distinguished from the monkeys of Africa and India by their slender, spider-like form, and prehensile tails; in consequence of which formation they are adapted to climb the trees of the forest country in which they live. The monotrematous and marsupial tribes of animals, which are almost wholly confined to New Holland, the first indeed wholly so, are distinguished by peculiarities of structure which are not so readily explained, but doubtless adapted to some local necessity. Some of the largest quadrupeds, the elephant, the rhinoceros, the hippopotamus, the camelopardalis, &c. are unknown in America. Lions, tigers, hyænas, are confined to Asia and Africa, and the tribes which approach most nearly to them in America are very far inferior to them in energy. On the other hand, America contains the tareligrades or sloths, of which Cuvier has remarked, that they are so unlike ordinary animals, that we might suspect them to be the remains of another order of things. The southern region of Africa is almost an insulated tract of earth, and its animals are scarcely less peculiar than its vegetation. From innumerable observations of this kind, made by numerous distinguished zoologists, the conclusion seems to be warranted, that each particular species of animals had only one origin, or was created only in one spot.

Regarding the above facts as analogies, and admitting that each species of animals had only one origin, we see what importance attaches to the question of the genus of man containing one or more species.

‘If it should appear that there are any specific differences between the several races, we must admit that several distinct families of men have been created, probably in different regions, and at different times. But if all the tribes of men are of the same species, they must be inferred to be of one race or lineage; they all sprang from the family created on the banks of the Euphrates, which was preserved in an ark, and survived upon the mountains of Armenia.’ —Vol. i. p. 88.

This constitutes the second problem. It is to be premised, that the term *species* includes the single circumstance of ‘original distinctness and constant transmission of any character;’ varieties may be acquired and lost by tribes which sprang from the same original stock, but such varieties are not sufficient to create new species. Several species, though distinct, may resemble one another: the horse and the ass are of different species; yet they are in some points alike, and included in the same *genus*. In these cases, although

there is a likeness, there is also a diversity, and the latter is not of a nature which we can suppose to have been acquired. A genus then is only an assortment of several species on some principle of resemblance.

‘ But though the idea of species is simple and definite, it is not always easy to determine what races of animals are of one, and what of distinct, species. It is well known, that considerable varieties arise within the limits of one species, and such varieties are often transmitted to the progeny, and become, *in a great measure*, permanent in the race. It is hence difficult, in some cases, to ascertain whether two races of animals of the same genus, and similar in many particulars, but different in others, are merely what is termed varieties of one species, their diversity having arisen from the agency of external causes on a stock originally uniform, or tribes entirely distinct from their origin. We cannot find a solution of this problem by referring directly to any particular criterion or principle of distinction; but in order to arrive, in any individual case, at a satisfactory conclusion, we are obliged to enter into a variety of considerations, and survey the subject in different points of view, from each of which we may derive probable arguments.’—Vol. i. p. 92.

Dr. Prichard points out four principal methods of determining on the identity or diversity of species:—1. By reference to the principal laws of the animal economy. 2. By reference to the propagation of animals of mixed breed. 3. By a criterion founded on analogy to known variations. 4. By facts directly bearing on the subject. Thus, if particular races agree as to their physiological characters and habits, as to the duration of life, period of gestation, &c. they are presumed to be of one and the same species; for it has been ascertained, that the deviations in these respects, in the same species, are very few. With reference to the second method, there appears to be a repugnance between animals of different species, which prevents the production of hybrid animals in a *natural* state: the sterility of hybrid animals is not clearly established, but the repugnance just mentioned is sufficient to preserve the species distinct, and to mark the distinction between them. The criterion mentioned third in order must depend on the accuracy of our knowledge of the varieties which do occur in the stock of one species; it will then remain to be ascertained whether the varieties which distinguish the human race are analogous to them. The fourth method would be yet more satisfactory, if sufficient facts could really be collected, inasmuch as facts are always more important than analogies. We have now to follow the author in his application of these methods of inquiry to the different races of men.

It is difficult to compare with much exactness the duration of life in the people of nations, the habits of which are so widely different as those of the savage and the civilised parts of the earth; and the supposed brevity of the life of the savage is often accounted for by his intemperate habits, and the hardships to which he is exposed. The negroes in the West Indies, the Hottentots, the people of Paraguay, the Mexicans, and the native Americans, when not exposed to great fatigues, often attain a considerable old age; the Laplanders are said to be rather remarkable for long life; and, according to the most authentic accounts, there would seem to be little or no difference in this respect in any part of the world. By a comparison of the evidence of various travellers and men of science, including several physicians, it does not appear that, with respect to the age of puberty of women, their fecundity, the time of and symptoms attending gestation, and the period when the peculiar functions of the uterus cease, there are any differences except such as are readily accounted for by climate, by peculiar customs, or by peculiarities of constitution: no varieties seem to occur greater than are met with within the limits of any one nation. The ease and safety with which the women of negro races bring forth children, are not greater than what is often observed in the female peasantry of our own country, and more commonly in warmer European countries, as for instance, in the south of France, in which we are enabled to state, from our own observation, that parturition seems, in many cases, hardly to suspend the domestic occupations of the mother. The unity of the species of man is rendered probable by the peculiarity of his diseases, which, with very rare exceptions, such as hydrophobia, and the vaccine disease, are not common to animals. The diseases which attack different species of cattle do not affect other species; and those which affect the human race are not communicable to animals. All human contagions, and all epidemic diseases, seem to exert their pernicious influence on all the tribes of men; small-pox, the plague, typhus, rubeola, syphilis, &c. Negroes born and brought up in tropical countries suffer less from remittent fevers than the Europeans, but are by no means exempt from them; just as we observe, that although negroes suffer more from the rigour of a cold climate than white men, yet the latter are by no means exempt from the scrofula and phthisis, which are here so fatal to the negro. Nothing therefore in the laws of the animal economy seems to argue a difference of species among the different races of men; but we observe a closer alliance among the varieties of men than is ever met with in distinct species of animals.

Hybrid animals have been very generally considered to be sterile. The fact is rendered doubtful by some circumstances. Mulattoes, and other mixed breeds in mankind, are certainly not so; and if the mulattoes intermarry with either white or black people, all trace of the mulattoe is soon lost, though a mulattoe father and mother would produce mulattoe offspring. Nor we can hardly suppose, observes Dr. Prichard, that any thing like this would take place in the case of true hybrids; that the offspring, for instance, of an ass, could ever become a true horse. The offspring of the Spaniards, and of the South American female aborigines, are reported by Don Felix de Azzara to be of superior stature and elegance, and even of a fairer colour than the European Spaniards. This is analogous to the well-known improvement of breed by what is called crossing in animals, and also to what is observed in the vegetable kingdom; but no analogies render it probable that such would be an effect of a blending of different species. Nor is there any analogy observed with respect to the different coloured races, to the natural repugnance of animals of different species for one another. Numerous and familiar instances prove that even very pretty white women can accept of a black husband: the Turks, and other people of the East, and we may add, some voluptuaries in other countries, give the preference to black women.

Arguments for the identity of the human species, of a kind not less satisfactory, are derived from an examination of the variations in animals analogous to those existing in men, as to complexion, figure, and stature. Dr. Prichard takes the colour of the hair as the leading character with respect to the first, and divides mankind into three principal varieties of colour; the melanic, or black-haired; the xanthous, including brown, auburn, yellow, flaxen, and red hair; and the albino, or white-haired. These three principal varieties of colour are found in many tribes of animals, although the variety in the hue of the skin among the black-haired races has not, according to the author, any parallel in the brute creation. The difference of texture which has been often observed to exist between that of the negro and of the European, the skin of the negro being softer and more unctuous, finds an analogy in that produced in the skin of some animals in a state of domestication. The onager has a tuberculated skin, of which we see the peculiarity in the *chagrin* which the Levantines make of it. The ass, in a domesticated state, loses this character, and its skin becomes smooth. The differences in the shape of the cranium, by which different races are more strongly distinguished than by the facial angle, on which so much stress was laid by Camper, are no less observable in the

cranium of the boar and the pig; or between the Neapolitan and Hungarian horses; or between race-horses and draft-horses in our own country. The different proportion observed in the length of some of the bones of the extremities in the negro tribes, finds an analogy in the formation of the Norman swine. The pig, indeed, undergoes singular changes in different situations: a race of them, with solid hoofs, was known to the ancients, and exists in Hungary and Sweden. The European swine carried into the island of Cubagna by the Spaniards in 1509, degenerated into a monstrous race, with toes half a span in length, and in Cuba they grew to a prodigious size. The pig of Guinea has long ears, couched on the back; that of China a large pendant belly and short legs. Even the English and Irish pigs are easily distinguished by their form. Sheep present analogies equally striking. Oxen, goats, and domestic fowls, exhibit well-known and great varieties. The peculiarities of the hair, which so strongly mark different races of men, are not greater than those which are met with in animals of the same species. Differences of stature are not peculiar to man, or greater in any part of the world than may often be observed in the same nation: and, on the whole, it would appear that very considerable varieties occur in each species; that the deviations from a common model in mankind are less in degree than those which take place in many other species, and that there is, at the same time, a considerable analogy between the varieties which spring up in man, and those which appear in animals.

The details and observations connected with the fourth method of inquiry above specified, occupy about nine hundred pages, and consist of so many and such various particulars, relating to parts of the world, nations, tribes, and settlements so numerous, collected from so many authorities, ancient and modern, that nothing like an analysis of their learned, curious, and important contents, is at all practicable. In every page the reader will find some fact of more or less consequence, throwing more or less light on the original seat and subsequent dispersion of the human race. We can only attempt to notice a few of these as we proceed; and to prevent the confusion incident to numerous apparently unconnected particulars, we shall arrange them under a few distinct heads, observing the divisions of the author.

Africa.—The transition in physical character from the Asiatic nations to the Egyptians and Ethiopians, or to the Foulahs, is not very abrupt; and the complexion and features of these pass by an equally graduated change to the cha-

acter of the African negro, and again from his deep colour to the tawny hue of the Hottentot. The Hottentots have a resemblance to the Chinese, and between the Chinese and the Calmucks, as well as between the Chinese and the natives of America, there is a considerable similarity. The northern neighbours of the Hottentots, the Kaffers, have the high forehead and prominent nose of the Europeans, the thick lips of the Negroes, and the high cheek-bones of the Hottentots. The people of the vast empire of Kongo have been compared to the Portuguese, except for their colour, though the complexion of many of them is rather reddish than black; and some individuals are born among them, who, if they were not looked upon as monstrous, would probably originate a white race in Africa. We shall, however, subsequently see reason to doubt the probable continuation of such a race in that country, even if there were no obstacles of this kind to their production. In the language of Kongo a decided resemblance has been observed to that of the eastern part of Africa, as of Mozambique. There seems to be no one single nation, even in Africa, in which all the peculiarities of what is considered to be the negro character are found existing together in the highest degree: they are variously distributed to different nations of that continent; and perhaps in all are combined with more or fewer of the European and the Asiatic characters. The Yollofs are of a deep black colour, but their form and features are almost European: the people on the Gold coast and Slave coast, whose features and figure are most characteristic of the negro, are much lighter in their colour: in some tribes the negro features and the black colour are combined, and the hair is that of Europeans, and *vice versâ*. In various mountain tracts among the negro nations, tribes of a red colour occur, into which the black complexion of the neighbouring people seems to pass by degrees.

Nations of the Southern Ocean.—The people of New Guinea, New Britain, New Ireland, and other islands in the Indian Ocean, resemble those of African Guinea, being black, with short curled hair, and well made. The nations of other isles, to the westward of these, resemble the Indians. Farther west, at the Admiralty Islands, the people are of a light black colour, and in physiognomy resemble Europeans. Passing into the South Pacific Ocean, we find the colour of the natives of some islands black, and their character that of the negroes of Africa: in others, as in Salomon's Isles, the people are like mulattoes. The inhabitants of each island occurring in this long series, are always found to have some knowledge of the islands next in order. In the northern

group of the New Hebrides, including the Sandwich Islands, we find the people of Mallicollo to be black, their foreheads singularly low and sloping, and their general appearance such, that they have been compared to monkeys. Thus the migratory negroes of the East are traceable far south, and tribes of the same race are found in the islands of the Indian archipelago; but in the eastern and more remote parts of that range, the people, though black, have straight or lank hair; and both varieties are met with in Terra Australis, New Holland, containing for the most part straight-haired, and Van Dieman's Land woolly-haired people. Turning from the Australian and Papua races to the Polynesian tribes, dispersed through the more distant groups in the Pacific, we come to the people of Easter Isle, brown, like the Spaniards; some being darker, and some quite white. There is a circumstance connected with this island, in itself so curious, that, although it may not seem to bear directly on the inquiry which occupies us (with which, however, it is by no means unconnected), we quote the passage in which it is described:—

‘The most remarkable thing in Easter Island, and indeed the most wonderful phenomenon in the whole region of the South Sea, are those colossal statues which are scattered in great numbers over the island. These appeared very surprising to Roggewein and his companions, who supposed them to be idols, and said they were attended by men with their heads shaven, who were believed to be priests. Many of these images are erected on platforms, formed or faced with hewn stones, and from three to twelve feet high. The statues themselves are gigantic. One of them which had fallen measured twenty-seven feet in length, and this was thought to be surpassed by others. They represent the half of the human figure: the features are rudely but not badly formed, the ears are prodigious, and the head is surmounted by a cylindrical cap, not unlike the ornament of some Egyptian busts. They are formed of lavas, some of a soft and friable kind; but others so hard, that it is scarcely possible to conceive that they can have been wrought by any tools of which the present natives are in possession. Captain Cook, indeed, asserts that the present inhabitants have most certainly had no hand in them; for they do not even repair the foundations of those which have fallen into ruin. La Perouse remarked that they are very ancient; and many of them nearly destroyed by time. Neither he nor Cook perceived that they were objects of worship with the present inhabitants. But if these statues are relics of some former nation, what has befallen the people to whom they are to be ascribed? It seems that they are still used as morais, or burial places. There are also cylindrical heaps of stones as monuments of the dead, the meaning of which a native of the island explained to M. de Langle, by first laying himself down upon the

ground, and afterwards lifting his hands towards heaven, with an evident reference to a future state.'—Vol. i. p. 415.

The people of New Zealand are black, yellowish, or olive; their hair is black, straight, and long. There are many points of resemblance traceable in the inhabitants of Easter Isle, New Zealand, the Society Islands, the Friendly Islands, and the Marquesas: they all evidently sprung from the same people, migrating from one island to another, and subsequently undergoing some modification in each. Those of the Society Islands are of a clear olive or brunette complexion; their hair is brown, red, or flaxen. The people of Otaheite have been indeed described as white, tintured with a brownish yellow, from which are found all shades of variety, to the swarthy complexion of the New Hebrides. Among these, the finest race are the Marquesas. Their colour is nearly white, and their hair not confined to any general hue. The people of the Sandwich Islands use a language much resembling that of Otaheite; but they are a darker people, and have often crisp hair, resembling in these respects the Papua race more than any other Polynesian tribe, although proved by various circumstances to belong indubitably to the latter. The inhabitants of the Caroline Isles seem to be of mixed races; negroes, mulattoes, and white people. Various circumstances prove that the Polynesian tribes are not confined to the Pacific, but extend to the Indian archipelago and the coasts of Malay; the same islands often containing both them and the Papuas; the latter, who are savages, occupying the woods, the Polynesian races, the more level and maritime parts. The most remote islands included in the above observation are supposed by Dr. Prichard to have received their population from Java. The Javanese are known to have been a cultivated and refined people, and lords of the Indian ocean, and are supposed, with a great appearance of probability, to have been indebted for their superiority to the Hindoos. But their dispersion over the islands of the Pacific would seem to have taken place before they had emerged from barbarism. In the Philippine Islands the negro and tawny races speak a language not very different. A language resembling that of the Philippines is spoken by the black and woolly-haired people of Madagascar,—a remarkable circumstance, the tendency of which, with some others, is to prove that the Papua and Tawny races are allied. The latter, in the various islands of which mention has been made, exhibit almost every shade of colour from dark to light, with almost every variety of feature; and it is assuredly true, that 'it would be scarcely more absurd to assert that the natives of Edinburgh and London are distinct species of men, than

to maintain a similar pretence with respect to the New Zealanders and Otaheitans.'

' If we view these races together, they appear to furnish sufficient proof that the utmost physical diversity presented by the human frame in different nations, may and does arise from a uniform stock. They enable us to produce actual facts as examples of this deviation. We cannot, indeed, take all the steps at once; but we can go the whole of the way by degrees. The black race of New Hollanders does not deviate into the lightest hues, but it attains a middle degree; for the fairest Australians, though of a tawny colour, are of a much lighter shade than the darkest of the Polynesians. Among the latter, all the remainder of this gradation is easily filled up. If a few of the fairest New Hollanders were separated from the community, and placed on an island by themselves, they would form a race of lighter colour than the New Zealanders. Under favourable circumstances, would not this new stock deviate into still lighter shades, as the race of New Zealand, or its kindred in the Society Isles, has done? That this would happen, seems scarcely doubtful; and if it be probable that such a consequence would ensue from a contingency which must often have taken place in the history of the world, this seems to evince that the diversities of colour in mankind are not necessarily original differences. This observation holds equally, whether we suppose the blackest complexion in the race to be the primitive one, or take the alternative, or assume that the original colour was an intermediate hue. What has been said of colour may be applied also to varieties of form and other physical peculiarities.'—Vol. i. p. 488.

Indo-European Nations.—A particular analogy, which is very satisfactorily illustrated by Dr. Prichard, has been ascertained to exist between the Sanscrit, or ancient language of India, and the Greek, Latin, and German; and this analogy renders it at least probable that the nations included in it descended from a common origin; that is to say, the Indian, the Persian, the Pelasgian, (under which name Dr. Prichard includes the Greeks, the old Greek and Latin population of Italy, and some nations of Asia Minor), the Celtic, the German, and the Slavonic races. The Hindoos, it is well known, are divided into several nations. Their languages are three: 1. The highly polished Sanscrit, originating in a primeval tongue, which by gradual refinement became Sanscrit in India, *Pahlavi* in Persia, *Greek* on the shores of the Mediterranean. It has almost become a dead language. 2. The Pracrit written dialects, traces of ten of which exist. 3. The various and innumerable vernacular jargons, which are termed Magad'hi. Although the country of the Hindoos has always been inhabited by a people totally unlike them, they have lost little of their original character. Eighty-four castes are enumerated, and do not intermarry; and all, it is

said, may be recognised by their physiognomy, though they agree in a certain national character of form, complexion, &c. Some are fair, some black; but most of them dark brown, with black eyes and hair. The inferior castes are darker than the higher. The people of the northern provinces are lighter coloured than those of the south; and within the limits of the Hindoo nation there is every variety, from a colour almost as dark as that of the Yolloff, to the sanguine or xanthous complexion of the northern European. The short section on the Gipseys will no doubt be read with interest.

‘Before we take leave of the nations belonging originally to the Indian branch of the great Indo-European stock, it is requisite to take some notice of a race of people who have been for centuries scattered over many parts of Europe and Asia. The origin of the Gipseys was long unknown, till their real affinity was conjectured by Büttner; Grellman, however, has the merit of proving it. They appeared in Europe about the beginning of the fifteenth century. They call themselves Roma, Men; Kola, Blacks; and Sinte, perhaps from the river Sind, or Indus. The Persians term them Sisech Hindu, or black Hindoos; and that they really sprang from the Indian race has been ascertained by the comparison of languages.

‘But it remained long a question from what tribe of Hindoos the Gipseys came. This matter has been in a great measure cleared up by Captain D. Richardson, who has proved that a great affinity subsists between the Gipseys and a sort of people in India termed Bazeegurs, who are divided into seven castes. It is very probable that from some of these the Gipseys originated. This writer has shewn at least by a comparative vocabulary of the Gipseys and Hindoostani languages, and of the idiom of the Bazeegurs, that an extensive affinity exists between all the three.

‘Pallas remarked, that the language of the Gipseys very much resembled that of the Hindoos, resorting for the purpose of trade to Astrachan, from the Indian province of Multan. Adelung has exhibited a collection of words of the Multan dialect, from the vocabularies published at Petersburg, in comparison with as many corresponding terms in the idiom of the Gipseys. The result is, that a very near affinity certainly exists between these languages; but whether the dialect of Multan differs less from that of the Gipseys than the idiom of any other Indian people, remains to be proved.

‘With respect to physical characters, Captain Richardson says, that there is no peculiar feature which distinguishes the Bazeegurs from other nations of India. The Gipseys had, doubtless, at the period of migration from Hindoostan, a complexion and bodily conformation resembling those of other Hindoos,—so that whatever difference exists between the present Gipseys and the Hindoos must be regarded as a variation from the original character, occasioned

perhaps by climate. We sometimes see Gipseys in Europe of very dark complexion, who recall their Hindoo extraction; but the generality are, I think, scarcely darker than brunettes of the native race. However, as the breed is not free from intermixture with a foreign blood, we cannot draw any conclusion on this subject with positive certainty.'—Vol. i. p. 520.

The situation of Persia is such, that if the obscurity which involves its early history could be done away, it is probable the most important information would be obtained concerning the origin of nations, and the dispersion of the human race, and especially of the first divisions and migrations of those who peopled Europe and a part of Asia. But there is evidence that the Medes and Persians are allied in kindred on the one side to their neighbours the Hindoos, and on the other to the nations of the north of Europe, particularly to those of the German or Teutonic race. The Persians appear always to have been, as they now are, a fine and well-formed people, their features on the European model. Many of them are fair, but most of them are dark brown; the Afghans seem to be intermediate, as to colour, between the Hindoos on the one hand, and the Persians and Europeans on the other: in the northern parts of Persia, and in the countries bordering on it in that direction, the complexion of the people is much more fair.

Lesser Asia, and contiguous Parts of Europe.—The inhabitants of this division may be divided into the Pelasgian or ancient Grecian race, the Thracian, and the Lydian: the near affinity of the Pelasgi and Asiatic nations has been already mentioned. Colonies of one original people appear to have established themselves in remote times on the Ganges, in Persia, and on the shores of the Ægean.

'In the former situation, their speech was gradually moulded into the Sanscrit, and they became subject to the power and superstition of the Brahmans; in the second they became disciples of the Magian hierarchy, and their dialects were the Zend, the Parsi, and the Pehlevi: in Greece, their mythology and language acquired a more graceful character, but the proofs of a common origin are still equally clear and indelible.

'What may have been the destinies of the Pelasgian race before their arrival in Europe, we can only conjecture. Their way from the northern parts of Media is not very long or difficult. It is probable that the intervening countries of Asia Minor may have contained some middle points of colonization.

'The people of Asia Minor may be referred in general to the two other nations before mentioned; I mean the Lydians and Thracians.'—Vol. ii. p. 32.

We regret that it does not fall within the limits of this

Journal to give any account of the interesting inquiry, which occurs in this part of the learned work before us, into the origin of the Greeks. We can merely refer to it, and go on to other points in the chain of evidence bearing on general conclusions relating to the chief subject of Dr. Prichard's researches.

Italy and Sicily.—The barbaric population of Italy, including the Umbri, were probably of Celtic origin. The Etruscans, who spread very early over the greatest part of Italy, came, it would appear, from the East; and perhaps, according to Dr. Prichard, from some of the ports of the Phœnicians. The country to the south of the Tiber was very early occupied by the Ænotrii, people of Grecian descent. Sicily seems to have received inhabitants from Italy, though probably not from Italy alone. The inhabitants of islands, like their various vegetable productions, seem often to have been conveyed to them from different quarters by the sea and the winds; the neighbouring continents each contributing to convert sterility into verdure and productiveness, and deserts into the habitations of men.

Celtic and German Races.—Passing over many pages relating to Spain, Gaul, Britain, and Germany, we notice in this chapter (c. ix.), which relates to the antiquities, manners, and physical character of the Celtic and German races, that the first origin of these nations cannot be ascertained. The Celtæ already inhabited Gaul in the time of Herodotus, and the German tribes were spread over the earth before the age of Pytheas, who lived about the time of Aristotle.

‘ That these nations, the Celtæ and the Germans, were related by kindred to the Greeks, and more especially that they were connected with more remote eastern nations, the Persians and Indians, is an assertion which, when first announced, appears as visionary as any of the learned dreams of Jacob Bryant. But the researches of philologists, during the last twenty years, have established this position as a certain matter of fact. It is now well known that the Celtic and German nations speak languages radically and essentially allied to the idioms of the eastern nations above mentioned; and the connexion of the respective races, in descent and origin, appears to follow as an unquestionable result. The affinity of the German language with the Greek and Sanscrit, has long ago been also demonstrated by several writers of different nations;* and the same conclusion would have been as generally allowed in respect to the Celtic language, if it had undergone a similar investigation, from persons competent to form an opinion

* ‘Adelung, Bopp, Schlegel, Murray. Jamieson's *Hermes Scythicus*.’

on its analogies. On this subject I must be satisfied with availing myself of the fact, acknowledged as it is by those who have made philology their pursuit, and with referring to writers who have illustrated the affinities of the European and Asiatic dialects.—Vol. ii. p. 167.

Many remarkable coincidences lead to the belief that the institutions of the Celtæ were derived from the system of the Brahmans, and that the Gothic, or old German mythology, was also of eastern origin. For a particular account of these, we must refer the reader to p. 170 of the second volume, in which the correspondence between the customs of the Druids and those of the Brahmans, and between the religious and funeral ceremonies of the Celtæ and of the Hindoos, is very clearly shewn. The mythology of the northern nations of German race, and that of the Hindoos, is in many respects the same: even the dedication of the days of the week to particular planets, common among the northern people, was of Hindoo origin. The Romans were perhaps chiefly acquainted with the Lower German race, whose blue eyes, flaxen hair, and fair complexion, yet answer to their description of them. The true Deutschen, or Teutones, have a less sanguine complexion. The Celtæ are not distinguished by any particular character from the Germans.

On reviewing the whole of the nations termed Indo-European by Dr. Prichard, and particularly on considering the varieties in each of them, the conclusion that even the fairest of the European tribes trace their origin to the darker Asiatics, which at first has an air of improbability, certainly becomes credible; and we find reason to infer, that all the principal branches of European nations, the Celtic, the German, the Slavonian, the Pelasgian, had one common descent from a family of nations in Upper Asia, which also gave birth to the ancient Medes, to the Persians, and to the Hindoos.

‘ Even the physical phenomena themselves are of such a kind as to confirm the conclusion, that the various people of this division are of kindred descent. Although the differences are great between the extremes, there are no sudden transitions to be found. If we compare a Hindoo with a red-haired Dane, there is a great contrast between them; but if we see the northern Hindoo by the side of the most swarthy Persian, we can discern not so great a difference. Again; the Persian is but a shade darker, or, in many instances, not at all darker than a Portuguese or a Spaniard. In the south of France, the skin is still somewhat dark, and dark hair is most prevalent; but the same people in the north are more generally fair, and the Scandinavians, Danes, and Saxons, are chiefly of sanguine complexion. We have seen that in some tribes of the genuine

Hindoo race the skin is fair, and even that the marks of the sanguine variety appear.'—Vol. ii. p. 204.

We find ourselves obliged to pass over the chapters in which Dr. Prichard, with the same care, the same research, and apparently with the same accuracy by which all the parts of his work are characterised, traces the descent of the Western Asiatics, and the races of people inhabiting Northern and Eastern Asia, including of course the Chinese, from different parts of the great elevated steppe which forms the centre of Asia. But some notice must be taken of the native races of *America*, to whom peculiar circumstances give, perhaps, a more lively kind of interest than to those of many other parts of the globe. We have here a vast continent, a million and a half of leagues of country, unknown to the Old World, and as it were the product of the talent and perseverance of the New, a moiety of the earth in which we live, which may yet be termed of recent discovery, but already, when first it met the eyes of Europeans, inhabited from the extreme north to *Tierra del Fuego*, and by a people in many respects distinguished, and at first sight seemingly broadly marked, from all those known before, and at the same time united by a certain physical character in all that vast extent of territory, and expressing their ideas in languages so curiously and artificially constructed, as to seem rather the production of philosophers, than the medium of communication between savages. The general resemblance of the American races, notwithstanding the great varieties met with in so extensive a country, is clearly established: there is among them, as among the nations of Europe, a common type of organisation. Their stature is generally superior to that of the Europeans, or that of the nations of Asia and Africa: their bodies are smooth, destitute of pilar hair, the hair of their heads is generally lank, and although sometimes curled, never crisp and woolly: the general hue of skin among them is coppery, though some of them are white and florid, with red or yellow hair. There are very curious circumstances connected with their languages; all of which, from north to south, have an analogy with one another in the grammatical forms, though the words differ widely: and, as we have remarked above, all of them are as it were laboriously constructed, and all appear to have had their origin in some single point. In reading Dr. Prichard's book, we have frequently found it observed with respect to languages, that although particular words seem readily lost, so that nations originally connected become unintelligible to each other, the forms and idioms of language are often pre-

served in distantly separated countries long after their complete separation: and if there were not strong exceptions to this remark, we might indulge in the not improbable, though conjectural explanation, of the mere words being, in some measure, of accidental and arbitrary invention, and therefore widely varying among various people, and of the forms, idioms, and modes of expression among men possessing a more durable character, acquired from the habits of the human mind, which habits would not differ very extensively among simple or savage people, however widely scattered. But against this supposition is to be brought the fact, that in some examples the form and idioms are lost, and a great similarity is preserved in the words. In some cases both have been preserved, and the supposition of Dr. Prichard, that in some cases both may have been lost, and that consequently a total want of resemblance between languages is not conclusive against their original connexion, is at least justifiable. No very satisfactory comparison has yet been made between the American idioms and those of the old continent; yet it seems that 'in respect to most of the words denoting universal ideas and sensible objects of perpetual recurrence, words may be found nearly resembling each other in some of the idioms of America, and some of those spoken in Northern Asia.' The evidence of physical structure is less doubtful: the strongest resemblance exists between the Americans and the Mongoles, the Mantchoos and Malays. The resemblance between the native Americans and the Chinese colonists in the Brazils has been particularly remarked. All the early histories or traditional accounts of the American population, agree in referring the origin of their nations to the north-western extremity of that continent, from which indeed the original inhabitants of America not only seem to have spread themselves over that large country, but to have sent back colonies or tribes into the Old World. A class of nations, probably connected at a remote period, appear to have spread over a great extent on the eastern side of America; to the north, the Ugaliachmutzi, the Koluschi, and Kinaitzi; and on the south, the Mexicans and the other kindred tribes of Anahuac. The distinct traditions of the Aztecs trace this race from the north, but the Mexicans have doubtless improved much since that migration.

'But where was Aztlan, the origin of their traditional migrations? Was it in the barren and barbarous wilderness of North-western America, or in Asia? Torquemada observed that in all the ancient tablets representing the migratory march of the Aztecs, an arm of the sea was laid down, which Clavigero conjectures to have

alluded to the Rio Colorado. It may have been the record of a more remote event in their progress. At all events, it must be allowed that the researches of the Baron Von Humboldt have proved satisfactorily the Asiatic origin of the Mexican system of astronomical computation. The sciences and arts of the Aztecs were in some measure common to themselves and several of the ancient nations of Eastern Asia. Hence it is easy to determine what is the most probable supposition respecting the origin of the people.'—Vol. ii. p. 384.

The inhabitants of the cold country behind Nootka, and about St. Elias, further northward, are white: the natives of the low maritime countries of California are nearly black, and in other respects much resemble the negroes of Guinea: the inhabitants of the high table-land of Mexico are of an intermediate hue. The Esquimaux, who seem to extend in a continued line across the whole northern tract of America, are of a dark gray colour, their faces brown or olive; their natural colour, however, before it has been modified by grease and exposure to the continual vapour of lamps, is much whiter: their hair is coal black, and straight.

Three principal races, or families, inhabit the eastern parts of North America, the Algonquins, the Iroquois, or Six Nations, and the Floridian; the latter including the Cherokees, Chikkasahs, Choktahs, and the Creek Indians. It is very remarkable, that these nations are to be traced by their traditions, as well as other indications, to some remote country in the West. On their first arrival in the East, they found the country already inhabited. Even the North-western people, to whom the origin of so many nations is, we have seen, referred, have traditions tracing their origin from the West. 'The result of all these facts,' says Dr. Prichard, 'is a probability, increased by every new discovery in the antiquities of America, that the population of that continent proceeded originally from Asia.'

Traditions of a deluge exist, we observe, in various nations of America, in which the waters overspread the whole earth, except the tops of mountains, on which the people were preserved. This is the tradition of the extensive nation of the swarthy Chepewyans, who, according to their own belief, came from Siberia, and who agree in dress and manners with the eastern Asiatics. Several of the nations of Anahuac have traditions, and, as it would appear, distinct from each other, of an universal deluge. A tradition of a deluge also exists among the Mexicans. The following observation of Dr. Prichard, though made by way of remark on M. Klap-

roth's hypothesis respecting the deluge, will not be out of place here :

' If we compare the stories of the flood of Deucalion, and of the deluge of Satyavrata, celebrated in the legends of the Hindoos, both of which belong to the Indo-European family, with the traditions of the Semitic nations, the fable of the Babylonian Xisuthrus, and the history of Noah in the book of Genesis ; if we collate these with the Mexican, or rather Chiapan legends, which the abbot Clavigero and the Baron Von Humboldt regard as genuine American traditions, and which M. Klaproth has mentioned in connexion with the historical narratives of the Hebrews and the Hindoos, we shall be fully convinced that all these accounts relate, not merely to the same era, but to the same facts, and to the escape of the same individual persons.'—Vol. ii. p. 605.

Turning our attention to South America, we find two classes of nations, the *Moluches*, or people of Chili, and the *Puelches*, or nations in the eastern parts of America, south of Rio de la Plata. Some tribes of the latter, as the Pampas, are tall, well made, of a yellow colour, with black hair : the southern tribes of the Puelche are very tall. The Chilians also are tall, their complexion a clear reddish brown, which readily changes to white : some tribes are said to be quite fair. The Puelche and the Moluche are particularly distinguished from the nations of Paraguay and the tribes on the north-west coast of America, by not wearing the barbote, a piece of wood thrust through a perforation of the under lip. In the middle region of South America, no people so well deserve attention as the Peruvians, who had attained a high degree of social advancement before they were known to the Spaniards : their tradition was that the arts of life were communicated to them by strangers, who landed on their coast at some remote era ; and certain traits of resemblance to some Asiatic nations render it not improbable. They are of a copper colour, their hair is black, coarse, and sleek ; their stature rather diminutive.

There are accounts of early voyagers representing some among the tribes of the northern region of South America, the Parias, for example, as having been much fairer than they now are ; and, according to several writers, the old inhabitants of Paria were clothed, though the races now existing on the coast are naked,—assertions which, Dr. Prichard observes, ' would be indeed hardly credible, if we had not other facts very analogous, both in North and South America.'

We candidly acknowledge that the above very condensed details, taken from a long series of observations of great

interest, are brought before the reader in no very satisfactory form, and are far from conveying any adequate idea of the profound historical research and the accurate judgment which are exhibited in every chapter of Dr. Prichard's work. No one, we think, can peruse the whole of these interesting volumes without being sensible of the pleasure which always arises from the conviction that we are increasing our knowledge, and acquiring a store of information which seems to render any previous acquisitions of the same kind more valuable. Throughout the whole of the work, too, the prevalent idea of the singleness of the human species is rendered more and more probable, even to the most sceptical person, by accumulated proofs of varieties analogous to those which are seen in men existing in numerous animals descended from one stock, whilst the stream of mankind is (if we may so express ourselves) traced with considerable clearness on all sides back to an original source. The most minute investigations of science are brought in proof of the earliest records we possess in the sacred writings; and we seem to follow the wanderings of the human race from their original home in Asia over all the region of Africa, and from island to island in the Indian Sea and the Pacific, and into all the parts of Europe; and from one extremity of the New World to the other.

It may be said, however, and said justly, that something yet remains to be explained. The individuality of the human species may have been placed beyond doubt; the origin of all nations from one nation, and of the whole human race from one pair, may have been almost proved; and striking examples may have been adduced of the influence of change of climate on the structure of animals: but the origin of the distinctions existing between the different races of men, is still left obscure, and the very laws of variety, and the examples of man in great varieties of climate, tend rather to increase than to diminish this obscurity.

To take the single, but palpable and striking circumstance of diversity of colour. It is true that a gradual and not an abrupt transition is found to exist between the fairest and the darkest of the human race; but how did the differences existing between them commence? The dependance of the colour of the skin on the action of the sun, originally asserted by the Greeks, after them by the Romans, and, almost in our own day, ingeniously supported by Buffon, seems only admissible to a certain extent, and with many exceptions. The French philosopher endeavoured to prove the regular gradation of colour, from the blackest in hot countries to the palest in cold, ascribing occasional differences to exposure to

air. He was followed by others, particularly by Dr. Smith of New Jersey, a very intelligent writer, but who also conceived the dark colour of the nations of hot countries to be partly dependent on the influence exercised over the biliary secretion by heat. Even Blumenbach countenanced this kind of hypothesis. The truth however is, that the constitution of the negro is less influenced by extreme heat than that of the European, and that he is blackest when he is healthiest. That exposure to the sun affects the colour of the skin, is unquestionable; but the progeny of persons the most embrowned by this exposure are born fair, and white races are not known to become dark on removal to hot from cold climates; nor, on the other hand, do black people become white, even in the course of ages, in colder countries than those of which those who first removed were natives. The general law of the animal economy is, it appears, that *acquired* varieties are not transmitted from parents to offspring, and this law, of which we shall give a few illustrations from our author, seems to us to create a remarkable difficulty as regards the explanation of the springing up of such varieties as have extended into the physical characters of nations.

‘The descendants of European colonists who settled in the West Indies, in South America, and in India, many ages ago, are still born white.

‘Mr. Long, in his History of Jamaica, affirms, that children born in England have not in general fairer or more transparent skins than the offspring of white parents in Jamaica.

‘At the time of the grand rebellion, one hundred and forty years ago, many families went from England to Jamaica, whose descendants are said to be still as white as Europeans.

‘The author I have last quoted, affirms, on good authority, that families of Spanish origin in South America, who have avoided intermarriages with people of Indian, or of mixed race, remain as fair as their European ancestors. That this assertion is correct, I am convinced by the result of repeated inquiries.

‘In the East, we find some instances of much more early colonisation by people of white races, from the history of which similar results may be collected.

‘The Nevayets, or Moslem settlers in Coucan, furnish an example of this kind. These people migrated from Irak to the western coast of the Indian peninsula, in the first century of the Hejira. They systematically avoided intermarriages with the natives, even with Mohamedan families, for many centuries after their establishment in the Deccan. Consequently they have preserved their complexion, and there are even now some Nevayets whose countenances approach the European freshness.’—Vol. ii. p. 533.

Other examples are given by Dr. Prichard, and many of

the same kind might be added. The law above alluded to concerning the non-transmission of peculiarities, or varieties, relates only to such as are acquired after birth. Congenital varieties are proved by numerous facts to be apt to reappear, or to become hereditary. Thus supernumerary fingers and toes are not uncommon in some families; very peculiar features distinguish some illustrious houses; and a peculiarly rough skin has been transmitted in a family, called from that circumstance the Porcupine family, through four or five generations. That acquired peculiarities are not transmitted, but cease with the individual, we have abundant and most familiar proofs, both in animals and man. Ears and tails are cropped in many of the former without affecting the offspring of the animals so treated; and it is hardly necessary to observe, that limbs may be lost without the additional calamity of originating one armed or one-legged varieties. And it is important also to observe, that the repetition of the modification, or injury, however repeated from generation to generation, still cannot divert nature from her steady perseverance in the production of perfect creatures; of which, as the strongest of all examples, the practice of circumcision among the Jews may be quoted.

‘If no such law as this prevailed, the evils of all past ages would have been perpetuated, and the human race would, in every succeeding generation, exhibit more abundant appearances of accumulated misery. Every species would have become at this day mutilated and defective, and we should see on all sides men and animals destitute of eyes, noses, legs, and every separable portion of their bodies. The whole creation, which now, on a comprehensive view, displays a spectacle of beauty and physical happiness, would present to our eyes a picture of universal decrepitude and hideous deformity.’
—Vol. ii. p. 543.

The same law is shewn, though in a different light, by the offspring being liable to diseases from which their parents had become exempt, as small-pox, hooping-cough, and measles: the immunity was not congenital, it was acquired, and could not be transmitted to offspring. We cannot profess ourselves to be altogether satisfied respecting the non-transmission of a tendency to diseases from which the parents have suffered, or which we may consider to have been acquired by the parents. It is not the transmission of syphilis to which we allude; for that seems invariably to admit of another and very obvious explanation. Nor do we doubt that, in many cases where a disease is acquired, the tendency to it, or a peculiar infirmity of some organ or other, may have been congenital. But it is sometimes difficult to avoid the belief that the children of old East Indians (we of course mean in

the ordinary sense of this term, and not such by birth) transmit a tendency to hepatic disease to their offspring, in cases where the disorder seemed in the parents to be acquired from a residence in a tropical climate: nor can it, we think, be questioned, that weak and puny children often proceed from parents of whom the original constitution was good, but destroyed by debauchery. Instances of the latter kind would be more frequent, if it did not so commonly happen that parents of this description are united to healthy partners; the natural love of beauty being in this instance shewn in its connexion with the great end of preserving the species undegenerate. It may, however, be said, that even in the cases here alluded to, it is only the general *tendency* to disease that is transmitted; but there is assuredly some reason to entertain doubts on the subject. Admitting that there are no exceptions to the law, and that all varieties must be congenital, and must owe their origin to causes which have acted on the constitution of the parents, we shall not find the difficulty which we have stated to exist regarding their explanation removed. It is not only that the causes themselves, which, acting on the parents, do so influence them as to lead to the springing up of varieties in their offspring, are obscure; but that we are without any historical or traditional testimony, or any thing within the experience of living men, which tends to illustrate that varieties have so appeared in the human race as to be clearly ascribed to the action of such causes. The mere transportation of animals, and we believe of plants, is sometimes sufficient to produce a variety, as, in animals for instance, is so remarkably seen in the pig; but when we regard our own species, we cannot be said to find any decided analogy with what is observed in these instances. That such analogies have at one time existed, we can scarcely doubt; that is, that the race of man, as it has spread itself over the whole surface of the earth, has really undergone varieties, intended to adapt it to all the varieties of climate and circumstance, we do not question. All that we say is, and it is certainly not said with any improper pride of scepticism, that we have no record of such changes, or of the rising up of such varieties, and that they no longer take place. We find that white people, migrating for the sake of wealth, or transported for their crimes, continue the same in all climates and circumstances: nay, that for want of some facility of adaptation, they die in some countries, and cannot be preserved. Why have not the numerous colonies made in Zanguebar flourished, and undergone the variety which would adapt them to the climate? On this fatal coast, the Portuguese, and, at a much more remote period, the Phœnicians and

Arabians have made many attempts to exist; but all have been signally unsuccessful.

The difficulty is not at all removed by admitting, without regarding some apparent exceptions, that the native population of countries is found darkest in the intertropical region of the earth, except where the land is very elevated, and lighter-coloured more remote from it in a direction north or south: it is still the native population only in whom this variety of colour is found; those who emigrate to such countries, and whose children are born there, do not exhibit the peculiarity, nor are *their* children born with it, nor their successors, as far as observation and memory can reach. The question, therefore, still exists,—how did the variety begin? If we suppose a child of white parents to have been born black in the first instance, that child being afterwards united with a white partner, the offspring of this union might indeed some of them be black, but some of them would be white, or a mixture of both colours; and if these again were married to individuals of white colour, the dark hue would gradually disappear, and be lost in their posterity. These are not suppositions, for such varieties have at least been the product of the union of persons of different colours: children born of parents, one of whom was black and the other white, have been born with one-half of the body white, and the other black; the division of colour has sometimes been transverse, and a white body has been supported on black legs, and sometimes longitudinal, one side of the body and one half of the hair being European, and the other of the African character.

The colour of the skin, we are to remember, depends upon minute peculiarities of structure; and when a black child was first produced from white parents, the constitution of the parents, not their colour, must have been modified by climate, or by circumstances, of which we cannot well appreciate the nature or mode of action. These causes must have acted simultaneously on whole bodies or tribes of migrating people. When did this occur?

To us there appear to be but two methods of comprehending this matter. We may either suppose, that the effect is no longer seen in consequence of the altered habits of man, or that the first varieties were the result of that peculiar interposition of the Almighty, which, as we cannot trace effects to causes which we can understand, we agree to express by the name of miracle. With respect to the first supposition, it may be observed, that there are some striking analogies in support of it, in the effects which have followed the trans-

portation of animals. We content ourselves with quoting one.

'The cattle and horses which have so prodigiously multiplied in Paraguay, and in other parts of South America, are well known to have been conveyed originally from Europe. The domestic breeds are still of various colours, as in Europe; but the races which have run wild, and are entirely subjected to the influences of the climate, and the natural circumstances of the soil and situation, have assumed a peculiar colour. Don Felix de Azzara informs us, that the colour of the tame oxen is various. He adds, "Celle des troupeaux sauvages est invariable et constante; c'est d'un brun rougeâtre sur le dessus du corps, et noir sur le reste." In speaking of the troops of wild horses in the same countries, he says, "Tous ont le poil châtain ou bai-brun, tandis que les chevaux domestiques l'ont de toute espèce de couleurs." As both the wild cattle and horses are descended from the variegated domestic breeds, we have here an instance of a deviation from the characters of the stock, resulting from the peculiar circumstances to which these animals have been subjected. As the wild races of horses and cattle in other countries are of different colours, while in this particular country the colour assumed is uniform, it seems that the change is the result of local influences. These causes act fully on the wild race, while in the case of the domestic breeds, they are prevented from displaying their efficacy through the influence of the artificial state.'—Vol. ii. p. 560.

We shall not attempt to decide concerning the exactness of this analogy to what *may* have taken place in the human species; it would indeed be most presumptuous in us to speak confidently on a subject evidently regarded as very doubtful by our learned author himself.

For the supposition of the original division of mankind having been miraculous, we do not pretend to have any authority whatever. We have not of this, as of the first division of human speech into divers languages, any account in the Sacred Writings. We see an effect produced, at least apparently, in some remote era, the consequence of which was, that man could wander with impunity into regions until then unpeopled, and settle wherever his footsteps were directed by Providence; and we find that this effect is no longer produced. The population of the earth is accomplished, and men, though still endowed with great capacities of existence in countries widely remote, are now in some degree forbidden to rest in certain climates for which they are evidently not adapted, and for which they never become adapted, and in which, though they may live and become parents, their race soon withers and disappears. The same law which preserves the varieties produced in the first instance, now prevents

the passing of one variety into another, and precludes the origin of more. We have, it is true, no tradition, no record of the first great change in the appearance of men descended from the same stock; and this deficiency, concerning an event so very remarkable, which deprives us of a just right to assert that it was wrought by a miracle, makes us yet more unable to account for it in any other way. To those who may be ready to amuse themselves with the unreserved manner in which we admit the possibility of miracles, when professedly engaged in investigations into natural causes, we beg to recommend the following unanswerable passage from Dr. Pritchard; together with the note appended to it: they occur in that part of the second volume in which the diversity of languages is treated of.

‘There is, indeed, something which the mind is scarcely capable of admitting when first presented to it, in the very idea of a miraculous deviation from the usual course of natural events. But reflection will not fail to convince us that the succession of phenomena, which we term *the order of nature*, though it was in existence before our experience began, had its commencement; and that there was a period when events took place in a very different manner from that of which we are now witnesses. For example, there must have been a time, as the most sceptical person will admit, at which the existence of mankind commenced.* We have only to go back in imagination to that age; to represent to ourselves that at a certain time there existed nothing in this globe but unformed elements; and that in the next period, there had begun to breathe, and move, in a particular spot, a human creature; and we shall already have admitted, perhaps, the most astonishing miracle recorded in the whole compass of the sacred writings. After contemplating this phenomenon, we shall find no difficulty in allowing that events which would now be so extraordinary that they might be termed almost incredible, our confidence in the continuance of the present order of things having been established by the uniform experience of so many ages, would at one time have given no just cause for wonder or scepticism. In the first ages of the world events were conducted by operative causes of a different kind from those which are now in action; and there is nothing contrary to common sense, or to probability, in the supposition, that this sort of agency con-

* ‘The alternative of this proposition, viz. that the human race has existed from all eternity, has never been, as far as I know, seriously maintained. We have now a clear proof that it is false in point of fact in the discoveries made respecting the surface of the earth. It is well known that all the strata, of which our continents are composed, were once a part of the ocean’s bed. There is no land in existence that was not formed beneath the surface of the sea, or that has not risen from beneath the water. Mankind had a beginning, since we can now look back to the period when the surface on which they live began to exist.’

tinued to operate from time to time, as long as it was required : that is, until the physical and moral constitution of things now existing was completed, and the design of Providence attained.'—Vol. ii. p. 593.

But in introducing the second edition of Dr. Prichard's elaborate inquiry to our readers, we are rather moved thereto by the great interest of the subject than by any desire to exercise a spirit of criticism, or to display a frivolous ingenuity in matters to which we can only regret, in common perhaps with many of our readers, that we have never been able to pay any long-continued attention. We are, however, very far from thinking, that researches of this kind are unconnected with the proper studies of a medical practitioner, whose mind will always be benefited by widening his views of all that relates to human beings, and to whom the most varied knowledge of the capacities, varieties, and peculiarities of the human constitution become valuable by augmenting his resources under all the emergencies of human constitutions. No argument is, at least, required to prove, that very ample acquaintance with the natural history of man will in no way impede or interfere with the greatest practical ability, when it is recollected that the two living authors who have most signalised themselves in this country in this particular department, are persons highly distinguished by extensive and exact practical knowledge in medicine and surgery : we mean of course the author of the valuable work which has engaged our attention in this article ; and Mr. Lawrence, whose lectures on this subject, whatever objections may be urged, and justly urged, against some parts of them, must always charm and fascinate those who can appreciate valuable information expressed in elegant and powerful language. These studies, indeed, would seem well calculated to improve and enlarge all our views of sickness and of health, and our means of defending mankind from the various evils to which they are exposed, by shewing us, as in a vast panorama of the living world, the great objects of our care, the human body and the human mind under the influence of an immense variety of external circumstances.

With this we must be satisfied. *Why* such a variety of influences have formed part of the plan of Providence, why so great a difference has been permitted in men, and whether all the varieties are gradually to be reclaimed to that superiority from which naturalists suppose them to have degenerated, and even to be advanced far beyond it, are questions which we have no means of solving. Looking back on the history and progress of human beings, we can trace them from the mere creatures of necessity, protecting them-

selves from the elements and beasts of prey, to beings of various and extraordinary powers, spoiled by abundance, prone to indolence, open to crime, but preserved from these noxious influences by the positive convictions of experience, and directing their best faculties to high designs, and to all the nobler arts, under the protection of political institutions which were created for the preservation of the fruits of industry and skill, and for the protection of the weak against the strong. All the stages of this great progress are, as it were, visible at once, when we survey the different portions of the globe.* We find some nations yet barbarous, advanced in no perceptible degree above the condition of the first houseless wanderers of the desert; others which have advanced different degrees, and remain stationary; and some which, like our own happy land, have advanced steadily and far. A spectacle still more interesting is displayed to us, the gradual awakening of some part or another of the inhabited world into a moral existence; commerce, which never flourished without a considerable share of liberty, carrying that blessing with her, as well as all the conveniences and luxuries of civilised life, into every land; the devotedness of missionaries, the courage and enterprise of travellers, the politic rivalry of nations, public and private interest, all concurring in the great work of elevating and improving every tribe of beings bearing the human form, and, as a necessary consequence, daily adding to the aggregate of human virtue. The introduction of the impure religion of Mahomet into the nations of Africa awakened the faculties of many savage nations, but without improving their morals: there is nothing visionary, we think, in the expectation that the effects of the Christian religion will be more complete and felicitous. In this view of the state and prospects of human creatures, we cannot see any good reason for despairing of the advancement of any of their varieties. Mr. Lawrence has shewn, with much force of expression and copiousness of illustration, that hitherto the white races, those in whom the anterior and superior portions of the brain are fully developed, have done all which has distinguished or exalted the human species; and that the darker or rather the black races, with a depressed and retreating forehead, have never fully emerged from barbarism and servitude. To deny the pre-eminent importance of the anterior and superior portions of the cerebrum, would be to disregard not only daily experience, but the history of the nervous system in its whole series, from the lowest to the highest order of animals. But are we not justified in hoping,

that different circumstances would modify and improve the negro? Is it absurd, after all that we have seen of the supposed changes to which man has been subjected, to suppose that no causes within the whole range of nature, that none of the wide influences of civilisation, could ever awaken his mental faculties, and more completely develop his cerebrum? At all events, there are many nations evidently not precluded by any organisation of brain, from advancing far beyond their present state.

Can it be doubted, that the acute, intelligent, and voluptuous natives of the Polynesian tribes of the South Pacific, are incapable of civilization, or of learning and valuing all that appertains to moral science? They have at present no laws, and no art of writing; but they have invented, or at least possess and cultivate, some manufactures; they believe in a future state, but not in future punishments: are we to set limits to the improvement of such a people, if they had the advantages of better legislation, greater knowledge, and purer religion? We see no reason to suppose them incapable of receiving these blessings, and all the advantages that would flow from them. Nor can we willingly admit the belief that similar blessings are for ever to be denied even to the ferocious natives of the Andaman islands, who have been savages and cannibals as long as we have had any accounts of them, or since they were first mentioned by the Arabs, nearly a thousand years ago, people who have never yet attempted to cultivate the ground, but live on the accidental supplies of the woods and the sea. Those whose attention has been attracted to some of the most recent discoveries of geologists, know that in the structure of the earth there are proofs that some of the most common comforts of man depend on circumstances for which preparation appears to have been made in some remote era of which we have no record, and when the earth was exposed to a temperature far higher than what we have any reason to suppose has prevailed since it was inhabited by men. If such things are found to be, let us not too narrowly limit the connected destinies of man himself, the most important part of the creation of which we have any knowledge. A wide interval may separate causes from effects, but there is no reason to think that the effects we contemplate will not eventually follow many causes now in active operation.

III.

ON MOXA.

A Physiological Inquiry respecting the Action of Moxa, and its Utility in Inveterate Cases of Sciatica, Lumbago, Paraplegia, Epilepsy, and some other Painful, Paralytic, and Spasmodic Diseases of the Nerves and Muscles. By WILLIAM WALLACE, M.R.I.A. &c. &c. Surgeon to the Charitable Infirmary of Dublin, and to the Infirmary for the Treatment of Rheumatism and Cutaneous Diseases in that City, Lecturer on Semeiology and Clinical Surgery. 8vo. Dublin, 1827.

THIS small volume is published by Mr. Wallace, not only to give additional testimony in favour of the application of moxa in many obstinate complaints, but also, by offering a physiological explanation of its action, to present a distinct view of the circumstances under which its use may be expected to prove beneficial. He has preceded the whole by some remarks upon the neglect of this remedy in Great Britain, and seems disposed to give British surgeons credit for no small degree of prejudice and injurious nationality. In doing this, however, he appears to us to be forgetful equally of our character and that of our neighbours, which, without recurring, on either side, to evil passions, will sufficiently account for the neglect of many remedies in the one country which are common in the other. The English are always slow in adopting new opinions or new practices. 'Nolumus leges Angliæ mutari,' was the uncompromising language of those bold barons who laid the foundation of English liberty. It is still the characteristic of our countrymen. What has been established, we will not easily yield up; what is new, we require some proof that it is really beneficial, before we will adopt it: and of all nations in the world, the French are perhaps the least likely to eradicate the established opinions of their insular neighbours; for while we are, perhaps, sometimes even ludicrously cautious; they are as rashly precipitate, and every day has its new plaything. It is animal magnetism, galvanism, acupuncture, the employment of moxa,—it is craniology, or some other idol of the hour,—which, for the time being, engrosses the whole heart and soul of their scientific men. We have been accustomed to see these meteors vanish, almost as soon as produced, and it is not wonderful that we wait somewhat patiently for the result of more deliberate inquiries. But with all this, we do not believe that any purely national objections will in this country ever obstruct the adoption of peculiarities in the French practice, if such peculiarities are really beneficial. We have employed, perhaps, almost as extensively as themselves, those alkalies that are the peculiar

principles of many vegetable remedies; there are none of their authors celebrated in France, who are not also held in high estimation among us; and if our admiration of Bichât is somewhat less idolatrous than theirs, it is at least fixed on as firm a foundation, to wit, a well-grounded conviction that he was equally high-talented and industrious, and after a deep study of his system, that few have looked so accurately, and, excepting Haller, none so deeply, into the obscurest processes of the animal economy. But there is yet, perhaps, another reason, in addition to what we have given, which may have retarded the introduction of moxa into British practice. It has something trifling about it; and none perhaps in Europe seem so afraid of lowering the dignity of physic, by exhibiting any thing frivolous in their practice or conduct as English physicians and surgeons. It is this feeling, we apprehend, that has almost entirely prevented the employment of acupuncturation in England, though it was first suggested in modern times in this country, though the evidence of its efficacy is most unexceptionable, and though, in addition to this, we have the testimony of some of the ablest men in Paris in favour of its utility. We have ourselves tried it, and have proved its value to our own minds most satisfactorily; yet, with a somewhat large medical acquaintance, we scarcely know an individual who has at all investigated it. We have said more upon this subject than we might have done, because we really wish to see all national distinctions in matters of science completely abolished; and we feel certain, that there is no indisposition among us to refuse scientific improvements, merely because they are French. That we ourselves have no such feeling, a slight review of this Journal for the last year and a half, will amply prove, since a very large proportion of its pages has been devoted to foreign, and particularly to French medical literature.

Before we proceed to an analysis of Mr. Wallace's opinions respecting the action of moxa, we insert the following passage regarding the pain it inflicts compared with caustic issues, &c.

‘ In estimating the degree of pain which attends the application of any remedy, we should compare it with the evils which the remedy is meant to relieve. If the pain which is excited by the moxa be considered in this point of view, fewer objections can be offered to it than to many other remedies in daily use; for, while I know of none whose efficacy can be compared to it in many diseases, there are several which are much more painful. I have had innumerable opportunities of ascertaining the opinions of patients respecting the comparative pain produced by moxa, caustic issues, and blisters; and *I have never met with a single instance in which*

the moxa, when properly applied, has not been considered the mildest remedy by many degrees.

‘ Sir W. Temple applied the moxa in his own person, and what is the account which he has given of it? In the following words he describes his sensations during its application:—‘ For the pain of the burning itself, the first time it is sharp, so that a man may be allowed to complain: I resolved I would not, but that I would count to a certain number, as the best measure how long it lasted: I told *six score and four as fast as I could*, and when the fire of the moxa was out, *all pain of burning was over*. The second time was not near so sharp as the first, and the third a great deal less than the second. The wound was not raw, as I expected, but looked only scorched and black; and *I had rather endure the whole trouble of the operation than half a quarter of an hour’s pain in the degree I felt it the first whole night*.” This fully corresponds with the following remark made by Cæmpfer in his History of Japan:—‘ The pain is not very considerable, and falls *far short of that which is occasioned by other caustics or actual cauteries*. I have seen many times the very boys suffer themselves to be burnt in several parts of their body, without shewing the least sense of pain.’

The first section is entitled ‘ On the immediate cause of functional disease.’ It will be readily seen why this inquiry precedes any explanation of the *modus operandi* of moxa; for without ascertaining the cause of disease, we can scarcely be expected to understand the manner in which any particular remedy shall effect a cure; neither indeed can we know the proper times for employing it.

The first object of Mr. Wallace is to remove what he believes to be a misconception; viz. the distinction into organic and functional disease. Every disease he considers to be organic, because function is the effect of structure, and consequently no alteration in function can take place without a corresponding alteration in structure; or to use his own words:

‘ If structure be the cause of function, it follows that no modification can take place in function that is not preceded by a corresponding alteration in structure; nor can any modification of structure occur, without necessarily inducing a greater or lesser modification of function.

‘ Thus it appears, as function results from structure, all functional disease must arise from altered structure; and as all structure results from the function of nutrition, there can be no alteration in structure, without a corresponding alteration in this function. Hence, all diseases essentially consist in a morbid state of the function of nutrition, or of the primary function of organic parts; at least we must arrive at this conclusion in our present imperfect stage of knowledge.’

All this, however, we humbly conceive to be little more

than a dispute in words. They who speak most of functional disease, mean not that the organ which performs it undergoes no change whatever in the apposition of its particles, that they may not be relaxed or more closely placed together, or be affected in whatever other way we may suppose an organ capable of being affected, short of actual and manifest change of structure; but they intend thereby, that no such alteration has occurred as totally to prevent the resumption of the healthy state. And though the structure of an organ may be affected, it is not necessary that it should be changed because its function is changed; for the parts may remain in every respect the same, though they may be differently situated with regard to each other. There will, we believe, always be an affection of an organ where its function is diseased, but we do not see why this affection should always amount to a change of structure.

Though, however, we are not disposed to value very highly the doctrine alluded to, chiefly, nevertheless, because we think no rational person can really differ from Mr. Wallace in opinion, however he may be inclined to employ a different language in explaining himself, the following observations on the necessity of attending to the state of the solids appear to us particularly deserving attention. We have unfortunately had too many opportunities of witnessing that indiscriminate practice which is here condemned. The preternatural accumulation of blood in the cases referred to, is merely functional disease. If, however, it ever does occur, it is certain, as noticed by the author, that there is always also an affection of the blood-vessels themselves. To place them, therefore, in a healthy condition, is not less necessary than to unload them of their superfluous contents.

Observe, therefore, that, although it may be admitted that a given disease always exhibits a preternatural accumulation of blood in its seat, the mode of treatment which will be adopted by the pathologist who attributes the accumulation to the state of the vital properties of the solids, will be widely different from that of the practitioner who merely looks to the quantity of the fluids: the prime object of the former will be the restoration of the vital powers of the vessels to a natural state, always mindful of the influence which the fluids may have on these vital powers; while the latter will consider that, if he can, by any means, diminish the quantity of blood in the part, he must of necessity remove the disease. The futility of such principles of treatment will not, perhaps, be readily conceived by a young practitioner, who, from the nature of the doctrines which now prevail in the schools, considers the lancet and the leech as the grand remedies for every disease accompanied by vascular congestion. His views will, however, *if he has judgment,*

be soon corrected; and he will find, on many occasions, that as long as he limits his attention to the abstraction of blood, at the expense of neglecting the state of the solids, he will daily observe diseases, evidently accompanied by an increased quantity of blood in their seat, proceed from bad to worse, attracting to their foci, as long as life continues, the contents of the vascular system. That these views are not incorrect, and that they are founded on experience, I could easily establish by cases which have occurred to my own observation, and by the experience of others of accurate reasoning and extensive research.

‘There are three authors who have made some remarks connected with this subject, and whose remarks have just occurred to my recollection. Mr. Abernethy observes, p. 56 of his *Surgical Works*, Vol. I.:—“I would ask, too, practically, does blood-letting cure disorders in which there is a fulness of the vessels of the head? It must be granted that in many instances it temporarily alleviates them, but in others it fails to relieve, and even aggravates them.” Dr. Prichard, in his work on *Diseases of the Nervous System*, observes, at p. 72:—“I have sometimes seen repeated venesections ordered for patients labouring under attacks of paralysis, which had evidently proceeded from determination of blood to the head; when, after every successive abstraction of blood, the disease seemed rather aggravated than relieved: and in cases which appeared to be precisely similar, I have witnessed the most decided benefit to accrue from discontinuing the practice of depletion, and adopting a gently stimulating plan of treatment: and I can make a similar assertion respecting several other disorders of the nervous system.” The following remark, taken from Mr. Swan’s little *Treatise on the Nervous System*, is quite confirmatory of the observations of Mr. Abernethy and Dr. Prichard. At page 45, Mr. Swan remarks, “When a person has become subject to dizziness,” (a complaint which I believe to be uniformly attended by an accumulation of blood in the brain), “though he may, in the first instance, have been relieved by bleeding, yet should the complaint soon return, and especially if the body is much debilitated, a farther loss of blood will not only not relieve it, but will, on the contrary, increase it.” He recommends for its removal, under such circumstances, bark and generous diet; a recommendation which will be found to correspond with the views of disease which I have taken in this publication.’

We shall now proceed to explain the action of moxa according to the theory of Mr. Wallace. In doing so, we shall extract largely from his pages; and we have the more pleasure in doing so, because, even though we may not conceive that he has proved every point, there is no recourse to any fanciful and unknown principle; but he proceeds rationally, in attempting to deduce from things known, the existence and mode of existence of things unknown. He very quickly dismisses the very active volatile principle which the Baron Larrey sup-

poses, 'un principe volatil, très actif, que fournissent les substances colonneuses, lorsqu'elles sont en combustion.'

The first assertion is, that the action of moxa is very different from that of blisters, issues, &c. ; for 'in the employment of moxa it should ever be a grand object to prevent that state upon which the action of a blister depends, viz. inflammatory action,' &c. He then notices the most successful mode of treating chronic inflammation of the conjunctiva, when the acute stage is past, viz. by stimulants ; he refers to the experiments of Drs. Hastings and Philip, which appear to prove that the capillaries of an inflamed part are greatly dilated ; and in the following experiments he shews that moxa has the power of stimulating the dilated capillaries to contraction.

'The size of the capillary vessels in the ulcer having been previously examined with a lens, I burned a moxa over the surface of the ulcer, gliding it along during its combustion, and holding it at such a distance as to produce a keen feeling of heat. When the moxa was burned out, *a diminution in the size of the capillaries was evident, and this diminution was more remarkable when the ulcer was examined the following morning.*

'*Experiment 6.*—Richard M'Donnel, aged 56, residing at No. 4, Lower Exchange Street : a man in the habit of earning a livelihood by teaching among the poorer class of children, applied at the Infirmary for the treatment of rheumatic and cutaneous diseases, on the 6th of September, 1826, on account of chronic inflammation of the conjunctiva, accompanied by a *very dilated state of the capillaries* of this membrane. On the 10th of September, I applied moxa to the eye, in the same manner as I had applied it to the ulcer of the leg in the preceding case. *A contraction of the capillaries of the conjunctiva resulted, which was observable in half an hour after the application of the moxa, but still more obvious on the following morning.*

Mr. Wallace adverts at some length to the question, whether the effect of heat superficially applied, is confined to the skin, or if it extend more deeply into the parts beneath. We suspect that the phenomenon of the *coup-de-soleil* will be perfectly sufficient for the minds of most of our readers, without the additional proof from the cases of Ponteau and De Haen, in which the incautious application of the actual cautery to the head induced fatal inflammation of the brain.

In speaking of the power of heat to stimulate the dilated vessels of an inflamed part to contraction, Mr. Wallace discusses the objections that may be opposed from the inflammatory action excited by the *continued* application of heat ; and the following statement he supports by quotations from Dr. Hastings's experiments ; viz. that 'the excitement

which had been produced in the first instance by heat, causes by its continuance an exhaustion of the tonic power of the vessels, and a consequent relaxation and dilatation.' But this explanation does not remove the difficulty, unless we may add to 'the continued application of heat,' or the 'rapid application of intense heat;' for however short may be the time during which a red-hot iron may be applied to the skin, provided only it be long enough to produce disorganisation, inflammation will be surely set up; but in referring to intense and continued heat the same effects, there is nothing which is not perfectly analogous to the action of other stimuli, and nothing incompatible with the hypothesis in question. Opium, for instance, if given in a large quantity at once, produces instant stupor. In very small quantities, it first excites, but finally, according to the number of times it has been repeated, induces a more or less complete state of stupefaction.

It being then proved that the primary effect of heat is that of a stimulant, and that dilated blood-vessels may be excited to contract by it, we obtain in the action of moxa one of the requisites for subduing inflammation, or at least that part of it which depends upon the dilatation of blood-vessels. But it has been observed by Soemmering and others, that the absorbent system is impeded in its functions in inflammation; and the experiments of Magendie prove that plethora exerts considerable influence in effecting this obstruction. It may therefore be expected, that whatever increases the rapidity of the circulation will likewise increase the power of the absorbents. The following experiment seems almost to prove this hypothesis, beyond the possibility of cavil.

'Experiment 8. A child had been many weeks in the Charitable Infirmary, on account of a very extensive burn, produced by its clothes taking flame while it attempted to drink from a kettle which was sitting on the fire. The granulations of the ulcers which had resulted were latterly very large, soft, pale, much disposed to bleed, and, with all the care of the dresser, could not be kept down by the ordinary means of treatment. When an ulcer which was on the breast, was in the state described, I burned a moxa over it, at such a distance as to excite the feeling of pain, without producing any disorganisation. On the following morning the effect was most remarkable; the granulations of the part, and beyond the part, to which the moxa was applied, were sunk below the level of the surrounding skin, and might be almost said to form a little well, which lodged the matter. This experiment I repeated on other parts of the ulcer, and for several days in succession, and always with the same result.'

We sum up the account of this theory of the action of moxa in the author's own words:

' From the experiments and observations which have been laid before the reader in the present section, I trust he will consider me entitled to conclude, that caloric applied under certain circumstances, and with certain restrictions, stimulates in a powerful manner the capillary vessels, causing them to act with more force, to contract their diameters, and to circulate their blood with greater velocity; and that, either by this action on the capillaries, or by a direct action on the lymphatics of the part, it has also the power of exciting, in a remarkable manner, the function of the absorbent vessels. And, further, that the beneficial influence of moxa in curing or relieving disease, must depend on its tonic action over the functions of absorption and capillary circulation: for it has been already shewn, that the other effects of this remedy are incapable of affording any explanation of its beneficial influence; for, on one hand, when the moxa is properly applied, there is scarcely any inflammation excited; and, on the other hand, its beneficial influence occurs and has terminated long before a discharge is established.

' From all that has been said, it therefore appears, that the action of moxa on deep-seated disease is precisely similar to that which is exerted by some of our most valuable agents on superficial disease; and, therefore, that there can be no difficulty in accounting for its remarkable efficacy, and the rapidity with which it accomplishes the relief of some of those affections to which its therapeutic influence is suited.'

As the action of moxa is therefore stimulant, it must be evident, that whenever the vessels of a part are in a state of excessive action, the application of this remedy will be improper; that is, when acute inflammation is present: for though both in chronic and acute inflammation the capillaries are dilated, the preceding series of vessels are in different conditions. In the acute stage, they are in vehement action; in the chronic stage, they are merely passively increased in their diameters. It is, however, often an extremely difficult thing to distinguish accurately the acute from the chronic disease; and not unfrequently the surgeon is obliged to proceed with the greatest caution, timidly feeling his path, in the choice of his remedies. Mr. Wallace, after inculcating most strongly the impropriety of applying moxa in active inflammation, and admitting the great difficulty in making the distinction just referred to, lays down the intermission of symptoms as the best criterion.

' It has been generally said, that acute differs from chronic inflammation, in being attended by an increased action of the larger arteries leading to the parts inflamed; but it would be more correct to say, that the increased action of the larger arteries in acute inflammation is continued, and in chronic inflammation intermittent. It will in fact be found, that in acute inflammation there is a per-

manently increased action of the larger vessels of the part, and that in chronic inflammation the increased action of the same order of vessels is intermittent; and also, that in the state of active inflammation, the febrile symptoms are continued, while they are intermittent in the state of chronic inflammation.'

This, however, will not entirely remove the difficulty, for even in acute diseases there are remissions sometimes so complete as to deserve the appellation of intermissions; but the great obstacle is, that form of inflammation which is denominated subacute, and which, by a stimulating plan, will very readily run into decidedly acute. Whenever there is the slightest ground for this suspicion, we are recommended to recur to antiphlogistic treatment before the application of moxa, and to apply leeches, cupping, evaporating lotions, &c. as circumstances may demand.

Little more now remains for us, than to explain the mode of using moxa, and the diseases in which it has been found useful. Our readers, we trust, will not require to be informed, that the word moxa is not used to denominate any particular substance, but all such substances as, by burning slowly and steadily, admit of being employed in the operation we are about to describe. Hence very various materials have been taken at different times; as, cotton impregnated with nitre and thoroughly dried, the pith of the Indian reed, flax, hemp, &c. impregnated with some combustible substance. The moxa recommended by Mr. Wallace is formed by dipping 'lint or fine linen in a filtered solution of chlorate of potash; the solution being made by dissolving one drachm of the salt in four ounces of water. When the moxa is to be used of a small size, fine linen will answer best, but when of a large size, lint is to be preferred.' It should be well dried, and when used is to be formed into a cylinder, the end laid upon the skin being made perfectly level. A blow-pipe may be employed or not, according to the intensity of heat required. We give, in Mr. Wallace's own words, the directions for applying moxa.

'The moxa should be applied in painful affections to the point where the greatest distress is felt, if it be possible so to do; and in paralytic affections, it should be first applied over the origin of the nerves which lead to the diseased parts, and afterwards along the same nerves in different parts of their course.'

'The size of the moxa, the manner in which it should be applied, and the length of time it should be allowed to remain on the part, are points of some importance. All these circumstances must be regulated by the depth of the disease, and the nature of the parts to which we may wish to apply it. It may be used so as not to cause any injury of texture; in a greater degree so as to produce vesica-

tion; and in a still greater degree an eschar, and the eschar may be either deep or superficial; or, lastly, it may be employed in conjunction with the acupuncture needle. These different modes of using the moxa may be distinguished by the terms, first, second, third, fourth, and fifth, forms of application.

'The first form of application will answer when the disease is very superficial. It constitutes the objective cautery of the French writers, and is highly extolled by *Faure* in the *Mémoires de l'Académie Royale de Chirurgie*, tom. xv. 12mo, as a powerful remedy for the cure of ulcers. It may be serviceable in neuralgia when the nerve is very superficial; or in affections of the joints, when the synovial membrane is immediately under the integuments, as is the case in the knee and wrist. When used, it should be repeated at least once a day, and applied by holding the moxa in the forceps, as close to the part as the patient can comfortably bear; at the same time it should be moved slowly over the surface, backwards and forwards, until its combustion has terminated.

'I seldom have recourse to the second form of application, because it is not so effectual as the third, and it is more troublesome in its after treatment. It may, however, be usefully employed in tic douloureux, and to those parts on which the patient would not wish a cicatrix to be formed. In such cases the moxa is applied by holding it steadily, and as close as possible to the skin, without allowing it to touch it, and until the skin appears white, which appearance is owing to the detachment of the cuticle, and the formation of a blister.

'In a large proportion of cases the superficial eschar will be the best form of application. To produce this eschar the moxa must be placed on the skin, and allowed to remain on until the skin appears brown under it, which will in general be found to take place when the combustion of the moxa has extended to the distance of about a line from the skin.

'The deep eschar will be required when the seat of the disease is far removed from the surface, as in affections of the spinal marrow and of the hip. To form this eschar the moxa must be allowed to remain on until its combustion is complete, when the part upon which it was seated will be found black, and the surrounding skin slightly red and wrinkled. In this form of application it will be sometimes useful to increase the intensity of the heat by the employment of the blow-pipe; and when this is thought prudent, the moxa should be, previously to its application, surrounded by a cylinder of card-paper, which will have the effect of directing the current of heat downwards, and prevent its escape laterally.'

'When the moxa and acupuncture needle are used in conjunction, the following is the mode of operating:—I perforate a moxa of a proper size by a needle of such a length as will be sufficient to reach to the seat of disease, and at the same time extend so far beyond the surface of the skin as to keep the moxa about one inch from it, or so far as to secure the texture of the skin from injury. The needle is then introduced as far as the seat of disease by the

assistance of the port-aiguille, and as soon as it has been introduced the port-aiguille is removed, the needle being left in the part. The moxa, which had been previously perforated, should be now placed in a state of combustion on that end of the needle which projects beyond the surface of the skin, and allowed to burn round the needle by which it is thus transfixed. The heat disengaged from the moxa is communicated to the needle, and thence conveyed to the seat of disease. When the needle has cooled it is removed, and the wound or eschar produced by it is scarcely observable. I have also employed with remarkable efficacy the preceding mode of using the moxa in cases which required the intense application of this remedy, but in which the texture of the skin could not be injured, nor an eschar with propriety formed.

It is recommended by Larrey, that immediately after the application of the moxa the skin should be wet with the water of ammonia, and this for the express purpose of preventing the occurrence of inflammation: the very effect which those who do not understand the mode of action of moxa are desirous of producing! Upon what principle the Baron expected such a result from the application of ammonia, I know not; for he has not made any remark upon the mode of action of this application. Its effects are, however, such as he states, and clearly explicable, as will hereafter be proved, on sound physiological ground: it will, however, answer the same purpose to apply any other powerful stimulus. Alcohol, æther, turpentine, or ammonia, may be indiscriminately used; or even bruised garlic, which Ten Rhyne recommends in his work de Arthritide. The neatest mode of applying the water of ammonia, alcohol, &c., is by a glass tube. The fluid ascends in the tube as soon as it is placed in the bottle containing it. The operator should then put his thumb on the end of the tube while he lifts it from the bottle, and thus retains in the tube a sufficient quantity of the fluid, which he can then allow to drop on the surface of the skin as he pleases. I may here mention, that I have found tubes of this kind extremely useful for the purpose of dropping fluids into the eye.

To these extracts we shall yet add some of the cases illustrative of the power of moxa in various diseases. We shall give those only in which its efficacy appears to us undoubted; for we cannot avoid entertaining some suspicion that in many of the instances in which it seemed beneficial some imposition was practised. We may be wrong, but nothing is more difficult to detect than the pretence of local pains; and we well know that many of these are unattended with the slightest external appearance by which they can be recognised. The first case we shall extract is one of sciatica; the second is one of partial paralysis, apparently the effect of accident; and the third is an example of epilepsy.

CASE 6.—Martin Byrne, aged twenty-six, residing at No. 7, Off Lane, a labourer in the employment of Mr. Taffe, of the Pipe Water

Establishment, complains of severe pain in the left hip, behind the great trochanter, extending upwards to the sacro-iliac symphysis and loins, and downwards, along the back of the thigh and outside of the leg, to the ankle and external part of the dorsum of the foot. There is frequently a distressing and creeping sensation of numbness in the entire limb; and sometimes a sensation as if cold water was running in the line of direction in which the pain occurs. There are violent cramps, occasionally, in the calves of his legs at night; weakness of his loins, with a sense of stiffness and confinement in his hips and lower part of his back. If he attempts to extend the limb fully, while he is in the recumbent posture, an acute pain seizes his hip, and the outer part of his leg; and the same pain is produced by the act of standing. The pains are extremely severe on the nights of those days on which he has exercised.

‘ His figure is very much deformed. During progression, he throws the weight of the body off the affected limb on the opposite thigh; yet, owing to a second lateral curvature in the spine, the right shoulder is much higher than the left; there is a hollow on the left side of the trunk, between the ribs and pelvis; the abdomen projects to the front and right side, and there is a remarkable fulness in the superior and posterior part of the left hip. When placed on his back, there does not appear to be any difference in the length of the two limbs; and he lies in such a way as to throw one shoulder more forward than the other.

‘ Has been labouring under this painful affection for some months; was not deformed prior to the occurrence of the pain; attributes his complaint to exposure to cold last winter; has been at several hospitals, and has used blisters, liniments, and a variety of other remedies, without relief.

‘ On the 28th of August, a moxa was applied behind the left trochanter; and on the 30th, a second to the sacro-iliac symphysis of the same side; on the 2d of September a third was applied on the loins; a fourth on the day after to the outer part of the leg; and on the 7th, a fifth was placed on the front of the ankle. On the 11th of September he was free from all pain; but on account of the weakness of his loins, and my wish to ascertain how far his figure would be recovered after the removal of the pain, he was allowed to remain in hospital until the 26th of October, when he was discharged free from all complaint, and vastly improved in his figure and mode of walking. From the date of his admission to the application of the last moxa, no other remedies whatever were used. Between the employment of the last moxa and the date of his discharge, he got two sulphur fumigations, which afforded much relief to the weakened and confined feelings in his loins and hips. During the progress of the separation of the eschars, a painful swelling of the glands of the left groin took place, which lasted for several days, but they did not suppurate.’

‘ CASE 18.—Thomas Wilson, aged forty-three, a sailor, formerly belonging to the coal-vessel Mary. He passes his urine slowly and

with difficulty, and is frequently unable to retain his stools; he complains of great pain in the lower part of the loins, and in his hamstrings, particularly at night. The natural feeling of his lower limbs is greatly diminished; when in bed he can draw them up to him, but cannot turn in the bed without great difficulty; and, in attempting to get out of bed, he is obliged to put his hands under the calves of his legs, and thus assist the extensor muscles; he is unable to stand without support. The temperature of his limbs is natural, and his general health is good.

Three months prior to his application at the Infirmary, he had fallen into the hold of a vessel; his feet came first on the ground, and then his bottom; he lay in this situation until the following morning, when he was conveyed to an hospital in town. He reports, that a number of leeches were applied to his loins; that they were repeated; that blisters were used; and his urine drawn off daily for upwards of a month. He also says that he was benefited at first; but that for the last month he had made no progress, and that he had left the hospital because there was not any thing a doing for him. He admits that he is worse now than when he left the hospital.

After a fortnight spent in cupping the loins and the thighs in the course of the sciatic nerves, and in the daily use of the tepid bath, the moxa was applied by means of the needle on the 15th of August, and repeated twenty-one times, with the interval, in general, of two days between each application.

He was discharged on the 30th of October, in such a state of recovery, that he had perfect command over both urine and fæces, and could walk without the assistance of either stick or crutch; his gait, however, unsteady, his limbs very easily fatigued, and unable to press his feet with force against the ground. On the 4th of November I saw him in the street, I stopped and asked him how he was? when with his hand he gave himself a slap on the thigh, exclaiming, "he would soon be as stout a man as in all Ireland."

CASE 30.—July 7, 1826.—This evening, at nine o'clock, I was called to see the son of B. C., Esq., aged fourteen years. On entering the bed-room in which the boy was, I found him apparently in a kind of restless sleep. He lay on his left side with his lower limbs drawn up, and frequently moved his arms as if not quite comfortable. His face was slightly flushed, his eyes were shut, or nearly shut, and any attempt at opening them was resisted by him with force, although he did not appear to be at all conscious of what I was doing: his resistance was purely automatic. His eyes, on examination, looked bright; the conjunctivæ were slightly injected; the pupils, particularly the right one, were very much dilated. I could not ascertain satisfactorily the state of the pulse at the wrist: it was very frequent, very irregular, without any distinct intermission, and might be said to flutter under the finger. His heart beat with violence, the systole and diastole were both distinctly to be

felt, but, as it were, conjoined, so closely did the one succeed the other: the heart acted 120 times in a minute: he had discharged his urine and fæces in the bed, and the bolster was stained with a fluid which had come from his mouth: the skin was moist, his hair appeared damp, and both trunk and extremities felt warm.

From an intelligent female servant, I acquired a knowledge of the following additional particulars:—That the attack had commenced about seven o'clock this evening, having been preceded by some heaviness or disposition to sleep; that his neck and upper extremities were affected with convulsion, but that the convulsive movements were twitchings rather than violent spasms, and that they would for a time cease, and again recur; that there was some foaming at the mouth; that the general surface was hot, the face flushed, and that the whole skin had been covered with a copious moisture; that, for a time, the left leg had been cold, but the right warm; that, occasionally he appeared to be sensible of his state, and that his eyes seemed to follow any one who spoke to him, yet he did not speak; that, during the convulsive movements his heart had beat with great force; that he had been as well as usual during the day, and that he had not complained of any uneasiness prior to the paroxysm; that the convulsive movements had gradually subsided, and were followed by the state in which I saw him.

I ordered some powders of calomel and scammony, and directed that they should be given as soon as he appeared able to swallow; and that they should be repeated at intervals until copious evacuations were produced.

On the following morning I found that the symptoms of the preceding night had all subsided. I was informed that, in the course of the night he had vomited his dinner unchanged, which had been of roast beef; that the powders had caused only one watery stool; that on awakening in the morning he was somewhat delirious and violent, and that he did not appear for some time to know those who were about him. He was, however, when I saw him, perfectly quiet, but rather fatuitous in his mode of expression. He complained of pain in the region of the stomach, and in the head; he had thirst, his abdomen felt tumid, but his tongue was not foul: pulse 84, and very feeble.

I was now surprised to hear for the first time that he had been paralytic of his lower limbs for six months, and that he had been already under the care of two other practitioners. On examining the limbs, they appeared full, well nourished, red, and firm; and I could not discover the least unnatural projection or deviation in the direction of the spine. Having got him out of bed, he could not stand without support; and when he attempted to walk he was unable to do so even with the assistance of a hand, and complained that the attempt produced great pain in the hamstrings. I was also informed that the fit in which I saw him was the fourth which he had had, and that each had been followed by a state of fatuity which lasted for some days. A convulsive paroxysm preceded the first

symptoms of paralysis, and it was only very gradually that it had arrived at its present degree.

'The abdominal discharges being much out of order, a system of purgation was pursued for about a fortnight. At this time the evacuations had acquired a more natural appearance; but no improvement had taken place in the state of paralysis. On the 30th of July he had a convulsive fit, which was, as far as I could ascertain, exactly like the one above described. The moxa, which had been before objected to, was no longer delayed: it was applied once a week on each side of the spinous processes of some portion of the spine; and in the interval of each application, about three ounces of blood were taken away from the region of the back or loins by cupping. The hot bath was daily used, with the aspersion of cold water on the head, and along the vertebræ. The bowels were regulated, and mild antimonial remedies were administered to act on the skin.

'The success which attended this treatment was remarkable,—before six weeks had expired this young gentleman, who had been for half a year before I saw him confined to his bed or sofa; or at best to creeping about the room on his knees, was restored to the fullest use of his limbs. No convulsive paroxysm occurred after the application of the first moxa, nor was there the slightest interruption in any respect to his progressive improvement. I think it necessary to mention, that he had been attended before I saw him by two of the first practitioners in town: by each for a period of two months. It is, therefore, unnecessary to say, that all ordinary measures had been tried before the moxa was applied.'

The long analysis we have given of this work is sufficiently indicative of our opinion respecting its value. We cannot say that Mr. Wallace has entirely removed our doubts upon the peculiar excellency of moxa as a remedy; but he has certainly shewn abundant reasons to induce every rational practitioner to investigate for himself before he rejects it. That acupuncture is highly valuable we know, though how it acts we know not; that the same may be the case with moxa is not improbable. That it has not yet been fairly tried in England no one can deny; and that there are many very painful diseases yet incurable by our common methods, is certain; there can, therefore, be no wisdom in rejecting a remedy because it is new, and that we understand not its action. On this, as on every other subject of medical science, we would strongly recommend the following remark of Dugald Stewart, as quoted by Mr. Wallace: 'Unlimited scepticism is as much the child of imbecility as implicit credulity.'

Whoever shall wish to study the action of moxa will find Mr. Wallace's book a good manual for their direction.

IV.

ANATOMICAL HISTORY OF INFLAMMATIONS.

Histoire Anatomique des Inflammations. Par A. M. GENDRIN, Docteur en Médecine, &c. Tome Premier. Pp. 719. Paris, 1826.

THE anatomical characters of inflammation, it is observed by M. Gendrin, have acquired within these few years additional interest from the importance attached to this diseased action in the new medical doctrines of Broussais; and it is rightly noticed, that, both to those who believe in the dogmata of the new school, and to those who impugn it, the study of the phenomena, and anatomical appearances of inflammation, is equally necessary: for to the former even nervous maladies will be only the consequence of inflammatory irritations,—while the latter cannot discuss or decide upon opinions when they have no knowledge of the facts upon which the discussion and the decision must be dependent. In the present volume, therefore, M. Gendrin has endeavoured to collect all that is known respecting the character of inflammation in the principal structures of the human body, and has employed with great industry and zeal the opportunities and advantages for anatomical investigation which the French metropolis so admirably affords. In the present article, we propose to give a brief analysis of his observations on the anatomical character of inflammation in the cellular, serous, and mucous membranes.

The investigation is commenced in each instance by an exposition of the natural state of these structures; but as this may be acquired from many works in the reach of every medical reader, we shall pass at once to the account of the alteration produced by an inflammatory action.

Cellular Membrane.—This tissue loses its elasticity and extensibility upon becoming inflamed. It readily tears; and if it is examined in a patient who has died from a wound before suppuration has been established, the niches are found filled with a reddish homogenous, gelatinous fluid, which cannot be separated by washing, nor much expelled by pressure. In proportion as we recede from the centre of inflammation, the cellular tissue becomes less dense, and exhibits a less vivid colour, till we reach the natural and healthy structure. The blood-vessels in the neighbourhood are always larger than when in a sound state. At the extremity of the red-coloured membrane, the tissue regains its elasticity, but is yet more easily torn than when entirely free from disease; at the same time its transparency is lessened,

and this in various degrees, corresponding to the intensity of the inflammatory action. In most bodies in which there are inflammatory tumours, suggillations are found after death; but at some distance from the inflamed part. These suggillations are the consequence of the infiltration of dark-coloured blood into the healthy membrane; and though not owing to an inflammatory action in the part where they occur, may, according to M. Gendrin, be referred to the obstruction arising from the neighbouring inflammation. If the inflammation is violent, and if adipose membrane is united with the common cellular tissue, the fat undergoes some alteration, and becomes changed into a reddish, and sometimes yellowish, soft, semi-fluid matter (*bouillie*), and at a more advanced period of the inflammation, this matter is found mingled with pus. At first it seems to follow the arrangement of the adipose cells, but soon loses all regular disposition. In proportion to the continuance of the inflammation, emaciation more or less extensive occurs, nor will the adipose membrane again secrete fat, till the inflammatory action shall have entirely subsided.

From the condensation which takes place in the inflamed cellular tissue, and the obstruction thus offered to the passage of fluid, it is found impossible to force an injection beyond the inflamed part, although the vessels running towards it are always larger than natural, and very visible.

Small cavities are sometimes found in the centre of inflamed cellular membrane, filled with dark-coloured grumous blood; and this may be regarded as indicating the approach of gangrene. This appearance is very common in the phlegmonous erysipelas, when the disease has been suffered to proceed a great length, without the employment of proper remedies. If in the latter stages of this disease an incision should be made, there is very little fluid blood found; but instead, large drops of the grumous blood above described, in the intervals of the adipose cells. Sometimes, in addition to this, a considerable quantity of serum, almost colourless, flows out, but very rarely any pus. If there has been strength enough to establish suppuration, the disease has generally a longer course, and, provided the matter be freely evacuated, the patient may recover. In the former case, however, there is no hope. Gangrene may be considered as established, and the patient seldom survives more than a few hours.

M. Gendrin has taken up some space in the account of the different appearances of pus that is found in the cellular membrane, and particularly in discussing the origin of those flocculi which are observable when the secretion of pus is

imperfect and unhealthy. We shall only observe, that we believe he is perfectly correct in considering them of the same nature with the factitious membranes that so frequently form upon the serous tissue in inflammation of this structure. Neither need we take up any room in discussing the manner in which pus, when secreted, is distributed. It will suffice to state, that it is either confined in cysts, or passes freely from one part of the affected limb to the other, according to its position, and according to the pressure that may be employed.

When pus forms in a cyst, we have an abscess as the result; when the inflammation occupies the whole cellular tissue of a limb, we have that form of disease which is known as phlegmonous erysipelas; and we are not aware, that matter ever forms very extensively in this membrane under any other circumstance. In the relation of a case of phlegmonous erysipelas, accompanied with dissection, M. Gendrin takes the opportunity of shortly noticing the absorbent power of the veins. In the instance alluded to, and in which the whole of the right thigh was involved in the disease, he found no pus in the lymphatic vessels, but in the veins a sero-purulent fluid was observed, of the same kind with that which existed in different parts of the cellular membrane. The veins were in a healthy state. This the author states is the only instance in which he found the veins to contain a well-secreted pus.

M. Ribes has given similar instances of pus existing in the veins; and as the lining of the vessels was perfectly white and healthy, and as collections of pus were present within a short distance of the veins, this circumstance has been naturally regarded as a fresh evidence in favour of their absorbing power. This, however, does not exclude the lymphatics from participating in the same function, since, under similar circumstances, pus has been found in these last-mentioned vessels, by MM. Cruveilhier, Dupuytren, and Velpeau.

The inflamed cellular tissue very slowly regains its natural state, though the inflammation should be subdued. It becomes condensed, hard, and much wanting in elasticity.

Chronic Inflammation of the Cellular Tissue.—When this membrane has been the subject of chronic inflammation, in whatever part of the body this may happen, it becomes condensed, crackles under the knife, and is uniformly filled with a thick gelatinous substance. According to M. Gendrin, and our own experience is in favour of his opinion, chronic inflammation of this structure is never attended by the secretion of healthy pus; but the matter secreted, whether

on the surface of an ulcer, or in a cavity, consists of a serous or sero-purulent fluid, more or less tinged with blood.

When the cellular membrane has been long subject to inflammatory action, it becomes very dense, and completely impermeable; and this is the common condition of the tissue in chronic rheumatism and in scrofulous diseases.

The cyst which surrounds chronic abscesses is the result of a chronic inflammation of the membrane under consideration, and it is sometimes lined by a factitious membrane. M. Gendrin seems to think that this membrane always forms; but our own observation leads us to a contrary opinion. Certainly if it does always form, it is occasionally so thin and imperfect, that it is imperceptibly discharged with the purulent fluid it surrounds.

From a state of chronic, this membrane sometimes passes into acute inflammation, and we have then a complicated condition, the result of the two species of diseased action. In different points the induration is much softened, and filled with blood; while the neighbouring parts, though still indurated, are much less dense, very moist, and can be very readily torn.

M. Gendrin states, that to observe accurately in all its shades the result of chronic inflammation, we should dissect subjects that have died with old ulcers, or with venereal and scrofulous tumours. In these investigations, he says, we always find the inflamed tissue consisting of portions of soft, red, and pulpy matter, mixed with others of a gray, reddish, and very dense structure. That these appearances are observed in such instances, is very true; but that they are the result of a simple inflammatory action, is not equally manifest. We know not, indeed, in what precisely either the scrofulous or the venereal morbid action consists; it is wrong, therefore, to mention the results of these actions, as specimens either of common or modified inflammation. Even when inflammation occurs, the phenomena are very different from simple, acute, or chronic inflammation. Antiphlogistic remedies can never be carried so far as in the last case with impunity, nor yet is much good derivable at any time from stimulants, while the practice is very often extremely dangerous. It is better to acknowledge our ignorance of the peculiar morbid actions of scrofula or syphilis, than, by attempting prematurely to simplify and explain them, to hazard the introduction of treatment which the united experience of every observing surgeon will combine in condemning. From this and several other passages, we apprehend that M. Gendrin is a partizan of M. Broussais; and it will be manifest to our readers, how lamentably the love of

system will induce men of talent and observation to distort facts according to their own preconceived notions. It could only have been a determination to see nothing but inflammation, that could have led M. Gendrin to class the morbid appearances resulting from syphilis and scrofula under the same head with those resulting from simple inflammation.

M. Gendrin has devoted one section to the anatomical appearances exhibited by the cellular membrane, when it is the seat of gangrene. There is, however, nothing particularly worthy of remark in this part, and we pass forwards to the morbid anatomy of inflamed serous membranes. In this, as in our account of the cellular membrane, we shall assume that our readers are acquainted with the healthy appearances of the various serous membranes of the body.

Acute Inflammation of Serous Membranes.—It had once been laid down as a fact by pathological writers, that the serous membrane surrounding a viscus never suffered from inflammation, without the viscus itself being likewise inflamed. It has now, however, been most satisfactorily proved, that both this circumstance and the reverse may happen; viz. that an organ may be inflamed without the envelope being at all affected. A serous membrane, however, is never inflamed, without the subjacent cellular tissue, by which it is united to the neighbouring parts, participating in the inflammatory action.

At the extreme limit of that part of a serous membrane which is suffering from inflammation, and where the membrane itself is in its natural state, the subjacent cellular tissue is still red, filled with a serous fluid, and can be very easily torn. When the inflammatory action has been very intense, it sometimes happens that bubbles of air may be perceived beneath the serous membrane, and in some parts raising it above the surrounding surface. This slight emphysema is entirely confined to the inflamed spots, and is manifested when there is not the slightest tendency to putrefaction; it does not always, indeed, exist when putrefaction has obviously commenced.

The infiltration of the subjacent cellular tissue forms the first degree of the thickening of the serous membrane. The transparency of this structure is more or less quickly lost, according to the compactness of its texture. In the tunica arachnoidea, for instance, which is easily resolvable into cellular membrane, the slightest degree of inflammation produces opacity: while in the peritoneum, a much more intense inflammatory action will still leave the membrane transparent.

When acute inflammation has endured for some time, the

very densest serous membranes gradually permit effusion into their structure. The result of this is a true thickening of the membrane itself, and a total loss of its natural transparency. The thickening comprehends both the immediate texture of the tunic, and the subjacent cellular membrane, by which it adheres to the neighbouring parts. Where this adhesion is very close, it is not always easy to ascertain the precise limits of the inferior surface of a serous membrane.

The pleura is the serous membrane from which, when inflamed, the inflammatory action most readily passes into the structure of the viscus.

The following is generally the progress of acute inflammation, as indicated by external appearance, when a serous membrane is its seat :—

It commences by a vivid redness, disposed in patches, and of a uniform colour throughout their extent. This redness is situated, as we have already noticed, in the cellular membrane attached to the under surface of the serous tissue. Gradually these patches become of a less deep hue, and the serous membrane itself participates in the inflammatory action. It appears dotted with red points, and traversed by a number of red striæ. The tunica arachnoidea, however, never becomes red entirely, and is very slowly injected; but it is rendered opaque as soon as ever the adjacent cellular tissue is reddened.

In a short time these red patches unite together, and then exhibit a dotted appearance only, such as we may conceive would be formed by innumerable petechiæ, very closely approximated to each other. The intervals between the red points are white, but more opaque than in the healthy state. At this stage of the inflammatory process, the membrane may very readily be raised from its attachments, as the subjacent cellular tissue is filled with a serous fluid, and is very little resistant. Effusion is a very common accompaniment of inflammation, but never of acute inflammation. Whenever this last occurs, even the natural secretions of the membrane are suspended. This observation seems to be accurate with respect to every serous membrane; and the remark of M. Gendrin, that effusion is only present when the acute has subsided into chronic inflammation, will, we believe, be assented to by every pathologist.

In the inflammation of this membrane, as in that of the cellular tissue, the condensation and consequent obstruction prevent the successful injection both of the serous and subjacent cellular membranes. The difficulty of distinguishing between mere congestion and inflammation has been frequently acknowledged by pathologists. M. Gendrin has

assigned the following characters of inflammation as distinct from erubescence dependent only upon congestion.

In inflammation, the redness of the membrane is at first pointed, its transparency is lost, and it is more dense than in its healthy state; and neither pressure nor frequent washing can make the inflammatory redness disappear; but the redness arising from congestion does not resist these means.

Besides the effusion of serum as a product of inflammation, both pus and coagulable lymph are sometimes found, the former without any breach of substance. The extent to which the latter proceeds is too well known to require any particular description. It varies very considerably in tenacity and in appearance; at times being little more than a soft, gelatinous-looking substance; at others, having the consistency, and apparently the organisation, of a true membrane. It is by means of the effusion of coagulable lymph, that those bands are formed which are so frequently met with in the cavity of the chest, and which unite the pleura pulmonalis and pleura costalis together. The abundance of this lymph in the peritoneal cavity is occasionally so great, that the intestines are completely matted together, are scarcely distinguishable, and we may suppose that their peristaltic motion must have been considerably impeded.

M. Gendrin has devoted separate sections to the description of the appearances that are observable in the inflammation of each serous membrane. We have not, however, time to follow him through all these; nor could we allow sufficient space to do them justice. They agree in the general characters with what we have already laid down, and their variations are referrible to the more or less dense structure of the particular membrane, and some little, perhaps, to its situation.

Chronic Inflammation of the Serous Membranes.—We shall not dwell long upon this part of our subject. The difference is rather in the results than in the first appearances. M. Gendrin has stated the erubescence of chronic inflammation is less vivid than in acute. It may be so generally; but from what we know of the chronic inflammation of the conjunctiva, the redness may be equally deep. In the result, however, we certainly have considerable differences; yet even these perhaps are rather in degree than in kind.

In the first place, the factitious membranes are generally much firmer, and more organised. Secondly, serous effusion to a considerable extent is more common. Thirdly, the membranes themselves become much more opaque, and undergo some alterations in structure, which appear to indicate something more than mere inflammatory action. They

have been found very thick, fibrous, and even cartilaginous, in some cases of very long standing; and granulations have been very commonly observed upon their surface. Whether these last changes are to be attributed to simple inflammation of the serous membrane or not, is at least doubtful: it is, however, certain that inflammation always attends them.

Inflammation of the Mucous and Villous Coats.—M. Gendrin divides the tunics which are generally known under the single denomination mucous, into mucous and villous; but though he may be partly borne out by anatomical structure in this division, we do not think it necessary to follow him. The variations in the appearances of the inflamed parts are only such as might be anticipated from the closer or denser structure of the different membranes.

Inflammation of the mucous tunic is divided by M. Gendrin into erythematous, pustular, and pseudo membranous. The first only of these forms we shall notice in the present paper; and even this we can do but very imperfectly. We may, however, refer to our review of Billard upon the Diseases of Mucous Membranes, for a more complete view of the subject as regards the lining of the intestinal canal.

The first and most prominent feature of inflammation of the mucous membrane is an increase of redness; and in the erythematous species this redness has no accurate limits, but gradually diminishes in vividness of colouring from the centre, where the inflammation is most intense, till the natural hue of the tunic is again visible, but without any exactly defined line to divide the inflamed from the uninflamed part. At the same time, the membrane is considerably thickened, and this thickening always occurs as soon as erubescence can be perceived, and sometimes even precedes it. Like the serous membrane, the mucous coat when inflamed may be easily torn from its attachment, and from the same cause, viz. the infiltrated state of the subjacent cellular membrane. This structure also becomes perfectly opaque from inflammation; but the inflammatory action may exist for some time before the transparency of the membrane is wholly lost.

The muciparous glands, in this species of inflammation, secrete much more abundantly than when in health, and the mucus loses almost all its viscosity. We have seen it so profuse and watery under such circumstances, as completely to deluge the bed in which the patient lay. Diarrhœa is a common consequence of inflammation of the mucous coat.

M. Gendrin has entered at some length into the inquiry, whether the characters of acute inflammation present during

life, may disappear at the moment of death. If, he says, this happens in any mucous membrane, it would certainly be in the conjunctiva, which, under particular circumstances, so rapidly alternates between extreme redness and total paleness. To solve this question, a case of ophthalmia is related, occurring to a phthisical subject in the last stage of the complaint. Four hours before the death of the patient, the redness approached to a purple hue, and was uniform from the internal angle of the eye to the edge of the cornea. In the remainder of the eye numerous red striæ were visible, and the mucous coat had lost its shining appearance. An hour after death, the redness was less vivid; it was more accurately circumscribed: twelve hours later, the red colour was changed to rather a livid tint. The membrane itself separated much more easily than in the sound eye. To make this observation more decisive, experiments were tried upon dogs. Inflammation was excited in the conjunctiva, and the animals were bled to death. The red appearances, &c., excited by the inflammatory action nevertheless remained unaltered.

To discover if other mucous membranes would exhibit the same phenomena, the bronchial tubes of a dog were irritated to inflammation by the repeated inspiration of chlorine. The trachea was opened, and through its whole extent was of a uniform red colour, particularly at its posterior part. The femoral artery was divided, and the redness, far from disappearing, became more manifest, in consequence of the healthy portion of the membrane being rendered pale by the loss of blood.

From these experiments, M. Gendrin deduces the general inferences, that increased vascularity produced by inflammation does not disappear at the moment of death. To us they are very insufficient for the purpose. We have seen cases of cholera examined, in which the purging and the tenderness of the abdomen had been excessive, where the fever was high, and which physicians of high standing and accomplishments pronounced to be symptomatic of inflammation. Yet upon examining the body, no inflammatory appearances were discoverable; the membrane was even paler than in health. Neither is the experiment of bleeding an animal to death a competent mode of determining the question. It is well known, that when the body generally is exsanguine from hæmorrhage, some one part will still be overloaded. The only real plan of proving the truth of M. Gendrin's doctrine, would be the examination during life of such cases as we have referred to, and where the local discharge was immense. Should it be found either that in these instances no inflammation is present, or that the inflammatory appearances

undergo no change after death, we may assent to this doctrine; but we suspect that the diarrhœa is in truth a means established by nature for resolving the inflammation.

This volume contains numerous cases illustrative of the different appearances in the different stages of inflammation. These are in some instances very instructive; but upon the whole we think the bulk of the volume is very uselessly increased by their number. It will in all probability, however, be frequently consulted by those whose opportunities of morbid examination are insufficient for enabling them to distinguish in all circumstances the morbid from the natural appearances of the dead body.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. *Dupuytren on Congenital Luxation.*

M. LE BARON DUPUYTREN has published a memoir in the *Répertoire Générale d'Anatomie et de Physiologie*, upon the congenital luxation of the head of the femur. The memoir is too long for us to extract the whole; but we shall proceed to give some of the principal characteristics of this deformity.

'This displacement consists in the transposition of the head of the femur from the cotyloid cavity into the external iliac fossa—a transposition which is perceptible at birth, and which appears to result from the want of a cotyloid cavity sufficiently deep, or sufficiently perfect, rather than from accident or disease. This displacement is of that kind which constitutes luxation of the femur upwards and outwards. There have been two species, or rather two varieties, of this malady recognised, accidental or consecutive, spontaneous or symptomatic. The variety now to be described is a third, and may be denominated original or congenital luxation.

'This luxation is characterised like all those in which the femur is drawn upwards and outwards by a shortening of the limb, the ascension of the head of the bone into the external iliac fossa, the prominence of the great trochanter, the retraction of almost all the muscles at the upper part of the thigh towards the crista ilii, where they form around the head of the femur a species of cone, the base of which is situated at the os ilium, and the apex at the great trochanter; the nearly complete denudation of the tuberosity of the ischium, deprived

of its muscles ; the rotation of the limb inwards, and consequently the direction of the heel and ham outwards, and of the point of the toes and of the knee inwards ; the obliquity of the thighs from above downwards, and from without inwards, an obliquity so much the greater as the individual is more advanced in age, and the pelvis acquires a greater volume, from which results a tendency to cross the thighs inferiorly ; an acute angle between the superior and internal part of the thigh and the pelvis, and emaciation of the whole limb, but particularly of the superior portion.

‘ If we observe the isolated movements of limbs thus formed, we find that they are generally very confined ; and that those of abduction and rotation are more so than any others, in consequence of which, the difficulty of standing, of locomotion, and of all those exercises in which the inferior limbs are employed, is very great.

‘ The nature of this defective conformation may be ascertained by a patient investigation of its history. If called early to the examination of individuals thus deformed, we find that from birth there are indications of its nature, such as extraordinary size of the haunches, prominence of the trochanters, obliquity of the femur, &c.; but as it almost always happens that the defect does not attract the attention of the parents till the child ought to walk, it is at this time that we are usually called upon to examine it. It is with difficulty at this period that the little patient can bear upon its feet, walk, or run ; sometimes even it happens that parents, little attentive, imagine that their child is only later in walking, and do not perceive the real cause for three or four years, when it is become so manifest that it can scarcely escape observation.

‘ M. Dupuytren states that they are unable to walk, and even to run, at length ; but that as the individual grows older, the deformity not only becomes more prominent, but from the greater weight of the trunk considerably impedes exertion. We cannot, however, afford space for the explanation of these facts ; but upon the whole it seems satisfactory. Neither can we enter into the speculation upon its cause, but we shall conclude our extracts with the anatomical examination of the deformity. The cases in which an examination can be had are necessarily few ; but the following are the appearances in the cases investigated by M. Dupuytren :—

‘ The muscles attached above and below the cotyloid cavity are all drawn towards the crista ilii. Among these muscles, some have a very remarkable volume,—while others are much diminished, and, as it were, atrophied. The first are those that have preserved their action ; the second are those, the action of which has been restrained by the change in the disposition and form of the parts ; and some of the last are reduced to mere fibrous tissue, of a yellow colour, without the slightest appearance of muscle.

‘ The superior portion of the femur preserves in all its parts its natural figure, dimensions, and relations, excepting that the head of the bone has sometimes a little lost its rounded form ; the result apparently of friction against parts which were not calculated to receive it. The cotyloid cavity of the ilium is either altogether

wanting, or presents only a small osseous, irregular prominence, without a vestige of interarticular cartilage, synovial or other capsule, and which is surrounded by firm cellular tissue, and covered by the muscles that are inserted in the smaller trochanter. In one or two instances the round ligament was elongated, flattened superiorly, and worn away, as it were, by the pressure and friction of the head of the femur. It was lodged in a cavity very similar to that which is developed round the head of the femur, in unmedicated luxations of this bone upwards and outwards. This new cavity is situated very superficially in the external iliac fossa, above and behind the cotyloid cavity, at a height proportioned to the shortening of the limb, or what is the same thing, to the ascent of the femur. Every thing, indeed, appeared the same as in old luxations from accident, excepting that they seemed to have existed from at least a very early period of life.'—(*Répertoire Générale d'Anatomie*, &c., tome second, 1^{re} partie.)

It will be evident to the attentive reader, that considerable doubt may exist respecting the nature of this deformity, or at least respecting its origin. We are inclined to believe, however, that though it should not be allowed to be congenital, it is probably owing to some defect in the cotyloid cavity. It is doubtless worthy of investigation; and we trust that the attention of English surgeons will be awakened to it.—EDITORS.

II. *The External Application of the Deuto-Ioduret of Mercury.*

In a memoir by M. Paillard, we are informed that M. Biett, physician to the hospital of Saint Louis, has employed this preparation with great success in syphilitic swellings of the lymphatic glands, and in venereal and scrofulous ulcerations, the healing of which it remarkably accelerates. M. Paillard has tried it in old and obstinate eruptions also with advantage.

'The deuto-ioduret of mercury is prepared with a solution of hydriodate of potash, poured into a solution of deuto-nitrate of mercury. There is formed in consequence an abundant red precipitate. The hydrogen of the hydriodic acid unites with the oxygen of the oxide, and forms water; the nitric acid is united to the potash, and the iodine to the mercury, forming deuto-ioduret of this metal.

'The sulphuric, nitric, and acetic æthers, and the nitric alcohol, dissolve a certain portion of the deuto-ioduret of mercury.

'Sulphuric æther dissolves it in the proportion of fourteen grains to the ounce. The nitric and acetic æthers dissolve ten grains in the ounce, nitric alcohol four grains, and alcohol five grains.

'M. Biett has employed the deuto-ioduret of mercury externally only, and for the purpose of establishing some change in the mode of irritation in the affected parts. It acts as a caustic.

'It may be applied either in alcoholic solution, in æther, or combined with lard, or in simple suspension in oil: with lard and oil, it

may be mixed in various quantities. The following is the combination recommended by M. Biett:—

‘R Deuto-Ioduret Hydrarg. gr. xv.

Axungie, ℥ij.

Essent. Bergamot, gutt. xx.’

M. Biett considers this a powerful remedy, but requiring very accurate superintendence.

Whatever preparation is employed, the quantity should be governed by the degree of cauterisation required. We translate, nearly without abridgment, the remainder of M. Paillard’s paper.

‘I employed,’ he says, ‘the ioduret in combination with æther, and by the assistance of a camel-hair pencil dipped in the mixture, I spread it three or four times over the part that appeared to require it. The patient at first experienced a sensation of cold from the evaporation of the æther; very soon the part was covered by a thin layer of a red substance, formed by the deposition of the deuto-ioduret of mercury, and smarted a little. In one or two patients, vesicles formed, which afterwards increased, and discharged a small quantity of serum; dry, yellow, and greenish scales then formed, separated by small fissures that penetrated into the body of the skin. If the pencil is very frequently passed over the part, pain, swelling, and the formation of numerous vesicles, ensue in a few hours, which on drying furnish yellowish prominent crusts, separated by small fissures, and often very similar to those designated by Alibert under the term of *crustacée flavescente*.’

‘After the crust has fallen off, which does not happen under two or three days, the eruption is found to be more or less improved, with small red cicatrices at intervals, similar to those which are produced by recently healed incisions. The cicatrices correspond to the fissures that separated the scales.

‘Thus employed, the deuto-ioduret of mercury produces scarcely any pain, and there are no constitutional symptoms. Its medical effects are little evident; but I have nevertheless seen squamous, purpurous, and tubercular eruption cured under its employment: but as in other circumstances the medicine was altogether inefficient, I was induced to apply it in a larger dose: accordingly I mixed a drachm in an ounce of sweet almonds, hoping to obtain in this dose a deeper caustic action, and, consequently, effects more decidedly beneficial.

‘At the moment of application it has no peculiar sensation, but in a short time the caustic action becomes perceptible: at the end of eight or ten minutes the heat gradually increases, and is at length converted into a severe burning pain; and the neighbouring parts swell, and become hot and painful. An hour later, a very abundant discharge of serum ensues; the pain ceases as the deuto-ioduret is absorbed, or completely dries; and it always ends after four or five hours. The swelling remains till the next day, or the day succeed-

* Povey’s favosa of Bateman.

ing the next. Occasionally, however, the pains and swelling are of longer duration.

‘ Sometimes a sudden salivation has ensued after the application of the deuto-ioduret of mercury to the cheeks or lips. M. Maury has seen two cases in his private practice.

‘ The pain may be alleviated by a current of cold air to the part; or emollient fomentations.

‘ Crusts form in this as in the former case, which fall off in a few days, leaving the surface of a red colour, with a great disposition to cicatrisation: sometimes, after one application only, several points will have healed. At other times the diseased surface is generally smooth and shining, and covered with a thin pellicle; the diseased parts being somewhat improved and lessened.

‘ The application of this remedy is usually more painful after it has been repeated several times.

‘ The constitutional effects caused by the employment of the deuto-ioduret of mercury are fever, colic and simple or sanguineous diarrhoea.

‘ These accidents probably depend upon the absorption of a certain quantity of the medicine, and of the inflammatory reaction of the cauterised part upon the organs of digestion.’—(*Nouvelle Bibliothèque Médicale*, Dec. 1826.)

III. Remarkable Effect of different Preparations of Opium.

‘ MADemoiselle E. B., of a nervous temperament, having taken nearly half a draught prescribed by M. Jules Cloquet, in which there was half a grain of acetate of morphia, suddenly sank into a state of syncope, which continued for two or three hours. It was attended, however, with the peculiarity, that she understood perfectly what was passing around her, but had no power either of speaking or making the least movement. She had headach, and the pulse was small, but not quicker than usual: This occurrence was not attributed to the acetate of morphia; but in July 1826 she was attacked by acute bronchitis; and as when the inflammatory symptoms had subsided, much cough still remained, pills containing a grain of calomel and a quarter of a grain of opium, were given her. She took one at night on going to bed, and slept very soundly. She took another the next day, but scarcely had half an hour elapsed, before syncope, presenting precisely the same symptoms as in the former attack, occurred, and persisted for three hours. The day after, unknown to the patient, half a grain of acetate of morphia was put into a five ounce mixture, and scarcely had she taken a spoonful before the headach began, and, to a certain degree, the other symptoms, so that the medicine was necessarily suspended.’—(*Archives Générales de Médecine*, Dec. 1826.)

IV. Employment of Acetate of Ammonia in cases of difficult Menstruation. (Communicated by M. Jules Coquet.)

‘ MADemoiselle —, of a nervous temperament, had experienced for seven or eight years very violent menstrual pains for

several hours before the catamenia flowed freely. The pains, at first dull, gradually increased in severity, till the patient rolled upon her bed in agony, with a pale and agitated countenance. She had sought for relief in vain from many medical men. At length, having learned, towards the middle of last August, the success obtained in a case of this kind by M. Professor Mazuyer of Strasbourg, by the acetate of ammonia, I gave this patient, who had for some hours been suffering extreme pain, fifty drops of the acetate of ammonia in two doses, and with half an hour's interval between each dose. It was given in a glass of sugar and water. Immediately after taking the first dose, the pains were alleviated, and upon the second, entirely disappeared, the catamenia being established. Being unwilling to conclude any thing from this fact, because she suffered for some hours, and because they might have been overcome sooner than usual by the spontaneous flow of the menses, I waited till the next period, with the determination of administering it at the very commencement of the pains. As soon as, therefore, the pains began this time, Mademoiselle took thirty-six drops of the acetate of ammonia in a glass of sugar and water, and the pains, instead of increasing, were very sensibly diminished. In half an hour, as she had still a slight feeling of uneasiness, she took another dose, and became perfectly easy; for the first time the catamenia flowed without being preceded by any violent pain, and she walked out two hours after. — (*Archives Générales de Médecine*, Dec. 1826.)

V. Intestinal Suture. Case of Strangulated Inguinal Hernia, during the Operation for which a Wound was made in the Fold of an Intestine, and a Suture employed in the Manner recommended by M. Jobert: cured.

‘NICHOLAS LEJEUNE, forty-one years of age, entered the hospital St. Louis on the 13th of July, 1826, on account of an immense inguinal hernia. The tumour was very tympanitic, smooth, and colourless; the integuments of the scrotum were greatly distended in order to cover it. The abdomen was painful, and he complained of colic. He had had no evacuation from the bowels since the morning, at which time the strangulation commenced; frequent vomiting; respiration laborious; pulse small, quick, irregular, oppressed; face anxious; moaning, indicative of much distress. The ordinary methods having been employed without success, M. J. Cloquet proceeded to the operation.

‘The hernial sac was exposed without difficulty, and several intestinal convolutions filled with gas were found in it. The parietes of the bowels were red and thickened. The first attempt at overcoming the strangulation not succeeding, the surgeon introduced Pott's bistoury a second time upon the index finger, into the inguinal ring. After cutting, as before, upwards and outwards, he withdrew the bistoury from the wound, when a fold of intestine escaped from the hands of an assistant, and slipping over the cutting edge of the instrument, was transversely divided to nearly

the extent of an inch; at the same time feces and gas escaped, proving at once the nature of the accident.

'The operator immediately proceeded to practice the suture recommended by M. Jobert, who himself assisted at the operation. It was executed in the following manner, the feces and gas being entirely evacuated from the intestines in the first instance.

'A needle, armed with waxed thread, was introduced into the side of the intestine, at two lines distant from its division, and drawn through again at about a line from the division; then, passing the needle to the opposite edge of the wound, he introduced it at one line, and drew it out again at two lines distant from the wound; after which, laying hold of the threads, he drew them together, thus approximated the serous tunic on each side the wound, and afterwards fixed them in the position by simple knots. Three sutures were inserted at equal distances, precisely in the same way; the threads were cut close off, and the whole returned into the abdomen. Four hours after the operation, he had an alvine evacuation, the pulse was relieved, and the countenance improved; in the night, pain in the left iliac region, with tenderness of the abdomen supervened; but was overcome by moderate antiphlogistic treatment. Twenty-five leeches were applied with demulcent drinks, and the pain disappeared. The next day there was still slight uneasiness in the abdomen, and leeches were again applied. The bowels were evacuated naturally.

'Some days after, the alvine evacuations were suppressed, without causing any constitutional disturbance in the patient. M. Richerand ordered some castor oil, which operated freely.

'From this time the wound healed rapidly, without a single unpleasant symptom.'—(*Nouvelle Bibliothèque Médicale*, Novembre 1826.)

VI. Diseases of the Nails.

M. ROYER COLLARD, in the Clinique Chirurgicale of the Hôtel Dieu, has given an account of M. Dupuytren's practice in the diseases of the nails and the surrounding parts. M. Dupuytren regards that part of the skin into which the nail dips at its root, as the productive organ, and has named it *the matrix of the nail*; and he carefully distinguishes between disease of this part, and that 'generally denominated the growth of the nail into the flesh.' It is to the former that we shall chiefly direct our attention: for so far as the latter is concerned, M. Royer Collard has been anticipated by Mr. Wardrop, whose practice, in our opinion, is far preferable to that of M. Le Baron Dupuytren. It is somewhat remarkable, that though M. Royer Collard refers to Mr. Wardrop's papers respecting the disease of the matrix of the nail, he never mentions his treatment of 'the growth of the nail into the flesh.' From repeated experience, we know the application of caustic to be efficacious, and we regard, therefore, the removal of the nail, as practised by Dupuytren, as unnecessarily cruel, although we do

not for an instant doubt that it is performed with great dexterity by this celebrated surgeon.

With respect to the affections of the matrix of the nail, M. Royer Collard says that Mr. Wardrop has confounded the syphilitic inflammation of this part with ordinary inflammation; and hence his success in treating it with mercury. The following are the distinguishing characteristics of the common affection, as laid down by this author.

- '1. It affects indifferently nails of both the toes and fingers.
- '2. It always attacks several together.
- '3. It commences sometimes by small ulcers, which are situated in the intervals of the fingers, and which generally proceed thence to the circumference of the nail.
- '4. The nail is spontaneously detached from its root.
- '5. It resists the antisymphilitic treatment. M. Dupuytren has tried mercury more than thirty times, but always with the effect of imparting a blacker colour to the wound, and a more fetid odour to the discharge.
- '6. As soon as the nail has fallen off, a simple dressing is sufficient to effect a cure.'

M. Dupuytren's plan of treatment is to remove the nail, together with that part of the skin which he considers the matrix, by which its reproduction is prevented. It is so extremely painful an operation, that we do not think it likely to be recurred to much in this country; nor is there any thing in M. Dupuytren's mode of operating that renders it particularly worthy of detail. The principal circumstance to be observed, is, that of cutting away a sufficient quantity of skin at the root of the nail.—(*Répertoire Générale d'Anatomie*, 3^e Trimestre de 1826.)

VII. On the Employment of Hydrocyanic Acid in Chronic Affections of the Lungs.

'THE hydrocyanic acid was given during this quarter to about a dozen subjects, who had symptoms of chronic pulmonary catarrh, or of phthisis in an advanced stage. The doses were variable, but never exceeded six drops. In three of the cases no sensible effect was produced by the medicine, the different functions being in no respect influenced by it; but in the greater number of cases it produced a sense of heat and constriction of the throat, and a burning feeling in the stomach; and in some more or less severe pain of bowels: in one phthisical patient it produced so violent a diarrhoea, although only given in doses of three drops, that it was necessary to discontinue it. The urinary and cutaneous secretions did not appear to be at all modified: no change was produced in the appearance of the tongue; nor were the circulation, or sensorial and intellectual functions affected. The cough, in half of the patients submitted to the use of the acid, was notably diminished, as well as the dyspnoea and the difficulty of expectorating; but the expectorated matter was not at all altered. The patients had better

nights, and were enabled to sleep. In one patient, a young man, attacked with phthisis, the cough almost wholly ceased, as well as the fever; but he had a relapse in the beginning of the winter, which proved fatal. In all these patients, anodynes and various other means had wholly failed.

‘According to the result in these trials, the hydrocyanic acid appeared to act particularly on the digestive canal, especially when given in a large dose. Many of the patients who experienced colic after taking the medicine, had taken more than was prescribed.’—*(From M. Martinet's Report of Diseases at the Hôtel Dieu, in the Clinical Wards of M. Recumier.)*

VIII. Use of Nitrate of Potash in Hæmoptysis.

‘SEVERAL patients affected with recent hæmoptysis were treated with nitrate of potash, either alone, or given with conserve of roses. The dose employed was from a drachm to half an ounce; and given in this quantity, it produced neither colic nor diarrhœa; the patients merely complained of an acrid taste, and a sense of heat in the throat: the urine was increased in quantity, and the hæmoptysis completely disappeared in a few days. In one patient, who had every symptom of the first stage of phthisis, the spitting of blood disappeared, and was renewed several times: in this case, although the nitrate of potash was given at first in the dose of half an ounce, mixed with syrup and mucilage, the patient experienced no inconvenience from it. The employment and success of nitre in large doses, we have frequently spoken of before; and this mode of administering it, which was borrowed from Italy, has become quite naturalised in France. Every day's experience shews, that in the above-mentioned doses, this medicine is far from being a poison, as was formerly considered, when it was thought necessary to prescribe it by grains.’—*(Id.)*

SECTION II.—INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. State of the Sick Poor.

WE entertained a hope of having to report, before this time, the progress at least, if not the result, of the correspondence which we some months ago spoke of as being about to be commenced, with the object of obtaining information on this subject. Those who have ever engaged in inquiries of an extensive nature, affecting a large portion of the public, can readily understand how many unexpected difficulties are to be overcome, or put aside, in the course of such undertakings. The great question, however, which relates to the state of the parochial poor in sickness, is, we are most happy to perceive, daily attracting more and more attention. No wish, we believe, exists, even on the part of those who are most

anxious for a reform of the iniquitous *farming* system, to force such a reform upon the public, or on the profession, so hastily as to affect the interests of any class of persons whose interests require to be taken into consideration. The time, therefore, which has necessarily intervened between the conception and the execution of a plan for effecting an alteration which, independent of other considerations, must materially affect the general practitioners throughout the country, will prove a very advantageous circumstance. We have reason to think that the present mode of providing medical and surgical attendance on the sick poor of parishes, has undergone much discussion in many quarters since our former observations upon it were published. We know, indeed, that in some towns of considerable size, the opinion of all ranks of the profession has been very strongly expressed on the subject; and we may now profess ourselves to be quite free from an apprehension (which there was, at one time, but too much cause to entertain), that the reform we have advocated would be effected by the public, either without the assistance, or at least with the tardy, reluctant, and ungraceful co-operation of medical practitioners. It has given us the highest gratification to observe, and it is a most agreeable duty to record, that, on this subject at least, the members of our profession seem almost without exception to be animated by one unqualified feeling of generosity. If there are exceptions to this feeling, many of them consist of those practitioners who cannot readily comprehend how a system to which they have always been accustomed, can be conveniently put an end to. The evils of the present system are acknowledged, and its inconveniences complained of by all.

A difficulty has frequently been suggested to us, which it may not be improper to advert to in this place. Some practitioners are deterred from an open expression of their dislike of the farming of parishes, by supposing that after such a declaration, there would be an inconsistency in continuing to contract for parishes themselves. But as long as overseers have the power to let the parish poor to the lowest bidder, so long must the country surgeons, even those of the greatest respectability, continue to compete for them. It would be lamentable indeed if the parishes should be given up to the trading contractors whose only recommendation to the overseers is the potent one of cheapness. The old surgeons must therefore continue to take parishes, and the young surgeons to try to get them, on the old plan. They are quite sure to find out the disadvantages of that plan, and we hope not less certainly to be reckoned upon for endeavours to improve it whenever a fit opportunity shall present itself. We have at least authority for saying that those who have hitherto been active in the projected reform, will never lose sight of it until it is accomplished.

We have to thank a kind correspondent for forwarding to us a little treatise, originally published in a volume of *Essays*, by Dr. Worthington, of Monmouth, a part of which we shall place before our readers on the present occasion. More than twenty years, we lament to see, have passed away since this treatise was

addressed to the public; so slow is the progress of opinion! The remedy proposed by Dr. Worthington is the establishment of more numerous hospitals, and of course on a scale considerably less than that of the generality of *county* hospitals. With respect to the necessity of legislative interference, we imagine it to be most probable that Dr. Worthington's subsequent observations may have led him to think it greater than he supposed it to be when he first directed his attention to the state of the poor in sickness. We deem it to be indispensable. If medical men alone were concerned, the change might be effected without the support of a parliamentary enactment; but it cannot be a matter of doubt to those who know the character of the overseers of country parishes, that as long as they can pursue their present illiberal system, they *will*. The following passages from the little work just alluded to, will not be uninteresting to the reader:—

‘ But my observations are now to be directed to the poor — *in sickness*.

‘ This is their most intolerable state, consequently that which presses most closely for commiseration and relief. It has fallen to my lot, though I am persuaded in a far more limited degree than to many of my medical brethren, to have seen and observed the condition of the *sick poor*. The result of such observation has satisfied me of this melancholy fact, that even in the best inhabited and most civilised vicinities of our island, great numbers of them perish through the want of medical and chirurgical assistance.

‘ How can it be otherwise? If we view the case in its more promising and favourable aspect, if we suppose the medical help afforded them at once in point of skill and punctuality to be unexceptionable, where are those “ appliances and means ” indispensably called for in the hour of sickness? where are the ordinary accommodations that can assist, or even admit, the due and necessary application of medicine? but, further, where shall we look for those domestic solaces which can cheer the sinking heart, and mitigate the force of distemper? These are not the attendants of a sick hammock, in a cold and ragged cottage, accessible in various parts to winds and snows.

‘ Let an anecdote, one I mean amongst *hundreds* of similar description, supply the place of lengthened declamation. I remember to have attended a poor, old, solitary man; solitary, because in fact he was the only inmate of the dwelling. He had a bedstead, and some scanty bedding; and his *house* consisted of what a pauper would pronounce two rooms. I found him in that wherein the bedstead did *not* stand; and in this, under such defence as he could make against the wind, he passed his days and nights. On inquiry for his bed, he told me that he could not use it because the *snow fell upon it*: I examined it with some anxiety, and found his report correct. If I could suppose any medical man to cast his eye upon this narrative, I would ask him, what could the power of medicine have administered in circumstances such as these?

‘ I have remarked that this pauper was solitary; the instance is by no means so: it is so far from being uncommon and extreme, that with a rigour equal in degree, however various in its mode, it may be found wherever poverty is found and winds blow cold, even throughout the best inhabited districts of England, Scotland, and Wales. In every situation, numerous are the examples, where the aid otherwise derivable from medical attention is opposed and frustrated by existing circumstances; among which, one of no slight consideration must not be passed over, for it is real and frequent, viz. the disappointments so generally experienced by practitioners when attending the sick poor in their own habitations, by the non-fulfilment of medical directions. This happens variously—from neglect, from ignorance, and from obstinacy: its source is diversified, its termination is one and the same; a subversion of the benefits proposed by an attentive and judicious practice.

‘ So far the sick poor may be considered as robbed of the possibility of receiving the full benefit of medical exertion, where the fortune of accident brings it to their threshold.

‘ But this is not the main point on which it is my purpose to remark; a consideration of far greater magnitude, because an evil of still wider comprehension, is here to be instanced; viz. *that medical attendance is, in the aggregate, so scantily provided for the poor throughout the whole of our island, that large numbers among them, who, by timely and continued aid, might have been rescued from death, are left to perish through neglect or ignorance.*

‘ Should any one be inclined to reply, this is indeed a melancholy and sombre representation, but it rests only on *assertion*, I would beseech him not to “lay this flattering unction to his soul;” I would call upon him to inquire, with circumspection and diligence, into the fact I have affirmed, before he ventures to reject it. I would caution him to beware of hastily deserting the cause of the poor. I request him thoroughly to examine this important subject, before he forms a decision, or even hazards an opinion. Perhaps he may not be well informed of the terms on which the benefits of medicine are procured and confirmed to the poor of most country parishes in this kingdom. Perhaps he is yet to be told, that they are consigned, *by contract*, to the care, and skill, and integrity of some neighbouring or distant apothecary,—for I have known apothecaries to reside several miles from their seat of parochial action,—who, if he possesses the qualifications necessary for the effective and conscientious discharge of this great trust, will doubtless devote as much of his time to it as can conveniently be spared from what he will be inclined to esteem his more interesting practice.

‘ Such is the posture of the poor in sickness, when placed in their most favourable and auspicious circumstances; I mean when fortunately committed to the direction of a country apothecary neither devoid of humanity nor skill, but who certainly cannot command that measure of time indispensable to their due and competent application.

‘ But if their best estate rises only to a degree a little higher

than neglect, to what must their depression sink, when handed over by the farmers of the parish to the management of a medical man whose principles of humanity are *weak* and *fallible* if brought in competition with his pursuit of self-interest; and whose qualifications, in a profession to which, though his own, he may feel no attachment, are so mean and insufficient that they would render his practice worthless, even if his mind invited to conscientious activity, instead of criminal indifference. To a son of *Æsculapius* such as this, the sick poor are frequently committed.

‘ That little more than a *nominal* attendance is meant by the apothecary, or expected by the farmer, when the *bargain is struck*, will be readily comprehended by the reader when he reflects on the *smallness of the stipend* which the one does not hesitate to propose, nor the other blush to accept, as a satisfaction for the amount of annual services. What is likely to be the extent of these, when they are frequently not valued, even by the contracting parties, beyond the sum of *five guineas yearly*? a salary not uncommonly settled between them for the labour of personal attendance, and the supply of every necessary article of medicine to a large parish, distant some miles, it may be, from the residence of the apothecary; who, for a due attendance on a single case of three or four weeks’ illness, would deliver in a bill of costs exceeding that of the parish stipend for a *whole year*.

‘ To expatiate on the fatal consequences hence resulting to the helpless poor, would be entirely useless. It is enough to have mentioned the circumstance: every common understanding, though little practised in the ways of men, will form its own comment, and deduce a sensible conclusion.’

‘ Having so far endeavoured to point out the generally deplorable condition of our sick poor, while left to the management already instanced, it will reasonably be expected that, while I am desirous of exposing such a system to abhorrence, and, if possible, to public condemnation, I have some plan of operation to propose, more rational in its principle, and more efficient of its purpose. I have so; and if it was not for my apprehension of its being deemed the less true, because it is obvious, or of its appearing to some speculatists impracticable, because it rests upon the presumption of an augmented beneficence, I should in no wise despair of its ultimate adoption: it may be comprised in a concise and single sentence—multiply your hospitals!

‘ It will here be objected, that, however inadequately this country may now be furnished with these benevolent and admirable institutions, the supply of fund necessary for their effective operation is difficultly obtained. To this I reply, your hospitals are too large, and the charities by which they are supported too select, or too local. Bulk is ever cumbrous and unmanageable; when broken and dispersed, it is easily controlled. Diminish the *magnitude*, and increase the *number*, of your hospitals; and it will follow, in moral and physical consequence, that their support and their usefulness will multiply together.

‘ Throughout England, the average of hospitals for the sick, if we except Middlesex, will probably amount to about three in two counties. I do not profess accuracy in this statement, nor does my subject require it. In the twelve counties of Wales there is not a single hospital.

‘ It is not within the design or scope of this essay to bring forward any *specific plan* for the accomplishment of its object, namely, the *numerical increase of infirmaries*—I wish merely to offer a suggestion to those who may not already have formed it themselves, and to repeat it unto those with whom it may not claim the praise of novelty, that there seems no other practicable method of softening the rigours of poverty, combined with disease, than by multiplying the number of asylums for the reception of the sick and destitute.

‘ To ascertain the best appropriate measure and extent of these, if we could suppose the subject to attract the notice of the legislature, and to be prosecuted on one great and simultaneous plan, would, of course, be the result of critical inquiry into the population and wealth of districts.

‘ In conducting this calculation, however, it will prove indispensably requisite to proceed, at all events, upon the following axiom; viz., that to give full effect to the salutary end in contemplation, hospitals should certainly be multiplied to that extent which will render them completely sufficient to rescue the sick poor of every parish in the kingdom from the assistance agreed upon between the inhabitants and such medical practitioner as, having condescended to the acceptance of an insufficient and pitiful stipend, discharges his account with conscience by an equally insufficient and almost worthless attendance; and, even on this condition, probably this unequal balance of *meum* and *tuum*, conceives the measure of his labour to exceed the value of his hire, and calculates on his scanty services as approaching to the claim and praise of gratuity. To rescue our sick poor from assistance such as this, is the *sine qua non*, the grand desideratum, without which our project of deliverance must terminate in imperfect and partial execution. But this desideratum can be fully effected and substantiated in no other way that I can discover, than by rendering the sick poor no longer the subjects of *annual contract* between the apothecary and the parish—that is, by the provision of suitable asylums.’

‘ One circumstance of advantage derivable from the plan I am recommending, will, I doubt not, be acknowledged by practitioners of whatever description—I mean the opportunity, thence resulting, of improvement in medical science, in the *knowledge and cure of diseases*: for it is not on the present mode of *parish* attendance, where inconvenience and embarrassment damp the ardour of exertion; where the most judicious practice may be foiled by mismanagement, and the most slovenly interred with the patient; that the result of the former can afford matter for rational conclusion, or the latter be exposed to reproach. Effects so desirable as these, must be looked for, not in the solitary cottage, inhabited by simplicity and ignorance, but in the public and frequented hospital, where

medical men do not act singly and unobserved by their colleagues; where, if duty and humanity are slow to plead, reputation and its consequences are quick of intimation; where diligence and talent operate in their appropriate sphere, and where the sick are committed to the best care that medicine and surgery can supply. It is, indeed, too palpable, that the administration of *such* medicine and surgery cannot be insured to every hospital which we wish to see erected; but it will enjoy the best afforded by situation and contingences; while, at all events, medical practice remaining the same, the poor will be placed in circumstances of far greater advantage, more easily attended, and that gratuitously, when lodged collectively in a comfortable and adapted hospital, than when scattered throughout the parish, in wretched habitations, and *farmed per annum*.

'I have hinted at the circumstance of *legislative interference*: but of this, if we could for a moment suppose the possibility, there surely can be no occasion, unless it should be accounted advisable, or should, on trial, become necessary, to lend a support to the institutions whose strong appeal is made to mercy and humanity, by the instrument of *taxation*; and which, on the condition of a previous abolition of the *poor rate*, could in no wise be justly esteemed a grievance.'

II. *Extracts from the Letter of a Physician travelling in Italy.*

'In passing over the Alps, it is impossible not to be struck with the size and number of the goitres; but our passage was too rapid to enable me to make any inquiries into this subject. The affection is strikingly more frequent in females than in males; and it would seem that there is some peculiarity of texture existing in the male sex, during the mature and vigorous period of life, which is opposed to the operation of the cause of goitre. I met with no decided cretins, nor with any circumstances which favour the idea of bronchocele being connected with mental imbecility. Cretinism may passively favour goitre, by retarding or wholly preventing the phenomena of puberty; but I should think this to be the only connexion between the two affections. Though a fair had collected an immense number of Alpine cattle at St. Michael the day that I was there, I could observe no appearance of enlargement of the thyroid gland in any of them. Some circumstances induce me to believe that salt of lime dissolved in the water may have some share in causing the disease. The rapid stream which flows for considerably more than a hundred miles through the winding valley, in the superior part of its course, traverses a district composed of sulphate of lime.

'The Roman physicians occupy themselves but little with the doctrines of the north of Italy. Hippocrates, and the other older authors, are still their favourite masters; and some of the medical men are very deeply read in them. Some of the professors set a bright example of industry to their pupils; but I cannot say that there seemed to be much enthusiasm prevailing amongst the latter. The clinical lectures are delivered, *ex tempore*, in a room adjoining

the ward. At the University the Professors sometimes lecture in Latin, at others in Italian; but the hour is rather curiously disposed of. It is begun and closed by a hasty prayer, and the intermediate space is about equally divided between a Latin dictation, which the pupils transcribe *verbatim*, and the *ex tempore* lecture. Some of the hospitals are very large. This is particularly the case with the Santo Spirito; but though there are wards capable of holding more than 200 or 300 each, absolutely unoccupied, there are others so crowded as to have three and four rows deep of beds on each side. This is said to be done for economy. The windows are high, and the part which opens small; the wards are consequently badly ventilated. There are admirable conveniences for dissection, and very good anatomical theatres; but these advantages seem to be rather neglected. The most striking and numerous preparations in their anatomical collections, are monsters, aneurisms which, for the credit of the Roman surgeons, appear to have been treated by the old method of amputation, and the nervous and vascular systems laboriously but uselessly detached from the other textures. The hospital which, by its construction and neatness, pleased me the most, is devoted to diseases of the skin. The house patients are all from the neighbouring country, the Romans being only admitted as out-patients. The greater number of inmates are children affected with *tinea capitis*. They are set to work, and paid their earnings on leaving the establishment. The mode of treatment is remarkable; the hairs are plucked out by the roots, by means of pliers resembling blunt bell-hangers' pincers. The children mutually perform this operation for each other, and it requires to be often repeated. When the hairs are removed, the little patients come under the hands of a priest, who, with a razor which he hones afresh for every individual, makes slight incisions all over the scalp, which is suffered to bleed for a considerable time. A simple ointment is then applied to the head, which is habitually covered with a bladder. There are merely simple warm and cold baths in this hospital. The lunatic asylum is only a place of confinement, as no means are made use of to promote a cure. At Rome I met with but few new medical works. I may mention a short but very interesting pamphlet on hydrophobia. The author, who formerly lived at Tivoli, but now resides at Rome, seems nearly to have demonstrated that this most distressing affection is only communicable by the animal in which its origin was spontaneous; and that bites inflicted by those who receive the disease from him are quite harmless. The author ascribes the origin of the disease to the venereal appetite provoked, but not gratified. Dr. Bomba, the Professor of Physiology, and a complete disciple of the old school, has published an essay to prove spurious a supposed aphorism of Hippocrates, and another, on the mode of connexion between the fœtus and the mother.'—(*Edin. Med. and Surg. Journal* for Oct. 1826.)

III. *Asphyxia*.

M. LEROY D'ETIOLLES maintains (*Proceedings of the French In-*

stitute) that the insufflation or introduction of air into the lungs of persons in a state of asphyxia is almost immediately fatal; an opinion certainly contrary to what is commonly entertained, and founded on some experiments made by him on animals. He states, that of seven sheep submitted to simple insufflation, four died immediately, and the other three in a quarter of an hour. There was no appearance of the lungs having been injured in the four which died instantaneously: in the three which lived the longest, air had escaped into the cavity of the chest.

At the next sitting, M. Segalas, in allusion to the above experiments, detailed some which he himself had made with a view to prove that the spirituous extract of *nux vomica*, strychnine, brucine, and camphor, which he says (we think not very correctly) are thought to produce death by *asphyxia*, act immediately on the nervous system. From this he concludes, that insufflation in cases of suspended animation, in consequence of these substances having been taken, is even, if not dangerous, as asserted by M. Leroy d'Etiolles, at least useless. We do not see the necessity for this conclusion: the object in either case is to keep the body alive until natural respiration is restored. The following, however, are the experiments of M. Segalas:—

‘ 1. If two animals are taken and asphyxiated, one by strangulation, whilst two or three grains of spirituous extract of *nux vomica*, suspended in a little water, are injected into the bronchi of the other, the poisoned animal will immediately be affected with a tetanic rigidity, and almost at the same time will become motionless and insensible,—whilst the motion and sensibility of the asphyxiated animal will be preserved for many minutes.

‘ 2. If, in order to make the situation of both animals the same as regards the fluid introduced into the air-passages, a quantity of water be introduced into the bronchi of the animal, which is to be asphyxiated, equal to that in which the extract of *nux vomica* is dissolved, the difference in the death of each is hardly less marked.

‘ 3. If, by way of making the circumstances of respiration perfectly alike in both animals, the heads of both are first cut off, and a quantity of pure water be injected into the trachea of one, and the same quantity of poisonous fluid into that of the other, the death by poisoning will yet take place more speedily than that by asphyxia, and the difference will be greater according to the precaution taken to prevent hæmorrhage from the decapitation.

‘ 4. The interval between the two deaths may, to a certain point, be extended at will, if artificial respiration is established in both animals immediately after they are decapitated, and a strong dose of the poison is injected into the peritoneum of one of them: the death of this animal will in this case take place almost equally soon,—whilst the other will survive twenty, thirty, or forty minutes, more or less, according to the care taken to prevent the loss of blood, and to keep up artificial respiration.

‘ Analogous experiments made with strychnine, brucine, and camphor, produced the same results.’—(*Biblioth. Méd.*)

IV. *Medical and Surgical Proceedings.*

WE were much at a loss, for a few days lately, to reconcile a paragraph which appeared in several London and provincial newspapers, with the respectability which we had had previous reason to consider attached to the name of the gentleman mentioned in it. The paragraph was, we think, headed *Stethoscope*, and stated that Mr. Jowett, of Nottingham, in a case of *empyema*, had actually pronounced, ‘*Right cavity of the thorax filled with fluid, which compresses the lung.*’ It went on to state, that an operation was determined on, that three pints of fluid were drawn off, and that the patient was cured in three or four months. Mr. Jowett is, we question not, quite as well aware as ourselves, that there was nothing very wonderful in all this; and that, if such a notice had been sent to the papers as an advertisement, the person so sending it would at once most deservedly have lost his rank as a respectable practitioner. We believe we can explain the circumstance,—at least we hope we can. Those who are accustomed to read that very pleasant and good-natured production, *The London Literary Gazette*, may observe, that the worthy editor of it occasionally sinks into hypochondriacism under the weight of anonymous poetry sent to him from all quarters of the land; and in these fits betakes himself to medical reading. In the Number for December 16th, we have a lamentable proof of one of these attacks, in the shape of a review of Dr. Scudamore’s recent work on *Diseases of the Chest, &c. &c. &c.*, in which review, the literary world are given to understand that Dr. Scudamore devoted five hours daily for *two or three weeks* to the examination of the most favourable cases for the application of the stethoscope, before he published a book upon it. The same friendly article also declares, that the editor, or writer thereof, had in January last ‘as dangerous an inflammation of the lungs as probably ever happened to any individual,’ and that he was attended by Dr. Scudamore, who used the stethoscope, and his patient got well. It further says, that Dr. Scudamore’s work on *Diseases of the Chest* is a *multum in parvo*. Now, it is in a note to this remarkably judicious and spirited critique, that we find Mr. Jowett’s name introduced, and, as we believe, the origin of the paragraph which appeared in the papers. Our only motive for noticing this, is to prevent Mr. Jowett’s name being taken improper liberties with; and if that gentleman thinks any further explanation necessary, we shall be happy to afford every opportunity for its being made.

This circumstance has perhaps made more impression on account of its having been pointed out to us about the same time that we received a communication informing us that a person calling himself a physician had sent a very tradesman-like circular to the inhabitants of a certain *cathedral town*, promising attention to orders (we believe), punctuality, &c. &c., after the approved custom of tailors ‘from London.’ We are quite at a loss for words in which to express our deep disgust at a proceeding of this kind. Where did this most *promising* physician obtain his degree? What justification can he offer for thus degrading the respectability of a profes-

sion by which he wishes to live? We challenge him to reply; and in the expectation that he *will* reply, in some way or other, we abstain at present from any further observations on what appears to us to be a most gross offence.

But this is not the lowest point of degradation to which our poor profession has fallen. Another circular has issued from the press during the last month, addressed, as we happen to know, to the inhabitants of a respectable part of the metropolis. This, also, we are given to understand, proceeds from a *Doctor*, and promises attendance 'on the most reasonable terms:' two visits, we believe, are to be given for five shillings, and those of tender years are to be attended for half price! Is there no power in the profession to punish delinquents of this description? It may be said, that persons resorting to these arts are generally below notice, and so perhaps they are: but when we see the same course pursued by men who claim the rank of gentlemen; when not a week passes without some puffing paragraph appearing in the newspapers relating to practitioners who *dare not* advertise more openly,—we cannot feel full confidence in the extension of such practices being checked by the contempt with which they are viewed by the respectable part of the public. It is commonly understood, that all advertisements and newspaper puffs answer, if carried to a sufficient extent; and the fear is, that every day may shew the increasing frequency among medical practitioners, of what ought to be confined to dealers in cheap goods, dentists, and manufacturers of macassar oil and bears' grease. A newspaper now lying before us contains two examples; one from Cheshire, relating to a case of tetanus cured by opium; and another, of which the subject belongs to a body which one of the most able as well as the most upright and honourable of the surgical lecturers of our time designates as 'a set of *chaps* who call themselves *aurists*.'

The delinquencies of this kind, too common, we are sorry to say, among men who profess respectability (it is indeed only profession), have for some time past attracted our attention; and though we may not designate the offenders by name, we shall on every opportunity expose the practices by which they seek to obtain reputation and emolument, without industry and without desert. We do not indeed expect that we shall be thus able, in any case, to bring old criminals to repentance; but if we should fortunately prevent any younger and more ductile mind from treading in the same iniquitous path, we shall feel our endeavours most amply repaid. Indeed we regard this mode of proceeding as far the most certain plan of insuring the real rank and respectability of the profession. It is calculated to maintain that purity of mind and action in individuals, which, if general, will insure the most dignified and noble station in the commonwealth, for the body of which they can be considered only as members. We are no radical reformers; we seek only for that which is practicable, and have no desire, by overturning the present system of things, to open a door for unbridled licentiousness and unprincipled profligacy. None

but those who are utterly destitute of all pretensions to success by the regular exertion of intellect, will find the present arrangement of the world incompatible with their welfare, or the attainment of high estimation and rank.

V. *Pulmonary Apoplexy.* By M. J. BOUILLAUD.

'FRANCES LACQUELIN, aged thirty-three, of a good constitution, was admitted into l'Hôpital Cochin, on the 18th of January, 1822. She had lain-in two months before, and the catamenia had not reappeared. She was treated for an abscess in the breast; and the day she was dismissed, exposed herself to a very cold wind while in a profuse perspiration. Cough, bloody expectoration, and distressing dyspnœa, were the consequence. After the lapse of six days, she was re-admitted. At this time, January 18, she suffered under almost suffocating dyspnœa, with a small, thready, and frequent pulse; agitation, orthopnœa, difficulty of utterance; face pale, lips colourless, or rather *bluish*, features expressive of the most distressing anxiousness, eyes prominent, restless, fearful; sound dull, and complete absence of respiration from every part of the chest. (*Death appearing imminent, bleeding was not practised, and a soothing medicine and sinapisms were ordered.*)

'She lived for ten days after her admission. During this time, the dreadful oppression of her breathing entirely deprived her of sleep, and often she called for death as a release from her agonies. *Her expectoration contained a great quantity of blood*; she expectorated with difficulty, and the dyspnœa was so great that she could not pronounce two syllables together. The whole right side returned a dull sound on percussion, and a crepitating râle was scarcely heard.

'*Examination of the body twenty-four hours after death.*—Organs of respiration and circulation: *The right pleura pulmonalis adhered to pleura costalis by a soft false membrane, evidently recent, but nevertheless traversed by small red filaments, the rudiments of blood-vessels, and shewing that the exudation was in the nascent state (l'état naissant) of cellular membrane.* The lung of the same side not crepitating, of an intermediate consistency between the spleen and that of the liver, was of a red colour, and very easily torn. Streams of frothy blood issued from incisions made into its substance. In the centre of the lung there was a black mass, consisting of effused and coagulated blood. A thick, grayish, and soft membrane surrounded this extravasation, in the form of a cyst. Around this was a kind of vascular apoplexy, that is to say, the pulmonary cells were filled with blood, in the same manner that pus exists in the cellular membrane before it is collected into an abscess. The left pleura pulmonalis adhered, in some parts, to the pleura costalis, and its cavity contained an immense quantity of a yellow-coloured serum. The correspondent lung, somewhat less inflamed than the other, crepitated in some parts. The heart was gorged with black blood, in part liquid, in part coagulated.'—(*Archives Générales de Médecine, Novembre 1826.*)

We have copied this merely as a specimen of French medical practice. It is one of two cases related by M. Bouillaud, to shew something that M. Laennec has not shewn; the principal part of which, we believe, is the bloody cyst, and the universally gorged state of the lungs. Had it not, however, been published in a respectable journal, we really should have hesitated to believe it possible that any case could have been so treated. There are few, we trust, of our medical brethren in this country, who would not have recognised an inflammation of the lungs, and have instituted appropriate remedies, though perhaps not able to apply the stethoscope or trifle with percussion. If this is French practice, we must congratulate our neighbours on the appearance of Broussais. The treatment we do not hesitate to call infamous; and sorry indeed should we be, that any of our own countrymen should in this manner become good morbid anatomists. The skill of the physician is shewn in curing the disease, not merely in specifying the precise pathological appearances that may by possibility be found should the patient be carried off. The latter appears to engage the principal attention of the French doctors.—EDITORS.

VI. *Artificial Incubation.*

In the *Journal de Physiologie* there is a long paper by M. Gaspard upon artificial incubation. It seems to result from his experience that the majority of chicks thus produced are the subjects of greater or less deformity, and that this is equally the case, whether the artificial means are employed throughout, or the latter half be effected by the natural heat of the hen. M. Gaspard did not reverse the experiment by rendering the first half of the incubation natural and the other artificial; but he refers to such an experiment performed by Reaumur, in which the chicks were well formed, and hatched at the usual period.

VII. *Death of Dr. John Mason Good.*

It is with unfeigned concern that we have to record the death of this very learned and able physician, whose name and whose medical works are so well known to our readers. He is reported to have died after a few days' illness, whilst on a Christmas visit to his daughter at Shepperton. Independent of his other medical writings, it is sufficient to mention, as a proof of his vast information, his powers of arrangement, and the grace and elegance of his style, his great work, entitled the *Study of Medicine*, of which the second edition extends to five large and closely-printed volumes. This work, notwithstanding the obvious objections which exist to the nomenclature employed throughout it, must always be considered a treasure of practical reference, by which the memory of the most learned in the profession may be aided, and the studies of the most inexperienced directed. But the medical writings of Dr. Good, though so voluminous and full of research, constitute only a small part of his literary labours. His acquirements as a scholar, and his acumen as a critic, were shewn in several literary produc-

tions, which we believe are highly thought of by those most competent to form a judgment of their merits: they doubtless are very honourable memorials of the learning and acquirements of a physician, who combined the advantages they imply the possession of, with great knowledge of all branches of medical science.

A few years ago, Dr. Good took great pains to ascertain the effects of the Tread Mill on those condemned to it. Although we believe the objections he entertained against that novel species of punishment are not considered to be well founded, the humanity by which he was actuated did him the highest honour.

We had not the pleasure to be acquainted with Dr. Good, but we cannot avoid giving this brief expression of our deep regret on the occasion of so great a loss as his death occasions to that profession of which he was a highly distinguished member.

Clinical Report of the most prevailing Diseases during the preceding Month.

THE early part of January was remarkably mild, though rather damp; the latter has been marked by deep snow and excessively hard frosts. We have seldom known any season present so little worthy of notice in the form of epidemic disease as the present winter. It has hitherto (and we speak not only from our own opportunities, which are extensive, but from repeated inquiry among private practitioners,) been remarkably healthy. Fever has almost disappeared, and, till within the last fortnight, there has been no very particular increase in the number or the severity of pulmonary complaints. At present, these cases are certainly rather more numerous than they have been, and we have seen one or two instances of acute rheumatism. Catarrh, as might naturally be expected, from the extreme alternations of temperature, has been very common, but seldom in such a form as to demand medical assistance.

During the two or three very cold days which occurred in the first week in January, we heard of several paralytic attacks, and, within our observation, this disease is quite as frequent, though evidently from a different exciting cause, as in very hot weather.

Since our review of Mr. Wallace's work was sent to press, we have tried the application of moxa in a case that seemed peculiarly adapted for it, and with complete success, so far as relieving the pain. It was applied in the manner recommended by this gentleman to procure a superficial eschar, and we can bear testimony to the accuracy of his remark, that the relief afforded is too sudden to be explained upon the same principles with the relief afforded by setons and issues. When we entered the house, the patient, a young woman, was unable to cough without screaming out from pains in the left side, which appeared to proceed from rheumatic affection of the muscles covering the chest in this part. The integuments were exceedingly tender to the touch. Two moxas were applied on the most painful points. The first had burnt within about three lines of the skin, when she said that the pain had left

her breast. The second moxa left her completely easy, and, excepting for a quarter of an hour on the day of the application, she has had no return of pain since. The patient had formerly had issues inserted, for pain in the lumbar muscles, and she represented the pain from the caustic as more severe than that from the moxa. We shall probably report this, with some other cases, hereafter more in detail.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. A Syllabus of Surgical Lectures on the Nature and Treatment of Fractures, Diseases of the Joints, and Deformities of the Limbs and Spine: containing Descriptions of the Modes of Applying Twelve New Apparatuses. Illustrated by Twelve Plates; with Cases, &c. By J. Amesbury, F.S.A., F.L.M.S., Surgeon to the South London Dispensary.

2. An Essay on the Use of the Chlorurets of Oxide of Sodium and of Lime, as powerful disinfecting agents; and of the Chloruret of Oxide of Sodium, more especially as a remedy of considerable efficacy in the treatment of Hospital Gangrene, Phagedenic, Syphilitic, and Ill-Conditioned Ulcers, Mortification, and various other Diseases. By Thomas Alcock, Member of the Royal College of Surgeons in London, &c. &c.

3. Rheumatism, and some Diseases of the Heart and other Internal Organs: considered in the Gulstonian Lectures, read at the Royal College of Physicians, May 1826. By Francis Hawkins, M.D., Fellow of St. John's College, Oxford, and of the College of Physicians; and one of the Physicians to the Middlesex Hospital.

4. Observations on the System of Teaching Clinical Medicine in the University of Edinburgh: with suggestions for its improvement; humbly submitted to the consideration of the Patrons and Professors of that institution.

Of these very judicious observations, from the pen of Dr. Clark, whose controversy with Professor Tommasini on the same subject, during his residence in Rome, must be remembered by most of our readers, we shall take further notice in our Number for March.

5. The Medical Student, No. I.

6. A Physiological Enquiry respecting the Action of Moxa, and its Utility in Inveterate Cases of Sciatica, Lumbago, Paraplegia, Epilepsy, and some other painful Paralytic and Spasmodic Diseases of the Nerves and Muscles. By William Wallace, M.R.I.A., &c. &c., Surgeon to the Charitable Infirmary of Dublin, and to the Infirmary for the Treatment of Rheumatism and Cutaneous Diseases in that City; Lecturer on Semeiology and Clinical Surgery.

Our readers will perceive that we have noticed this work in the present Number.

7. No. I. of Medical Botany; or Illustrations and Descriptions of the Medicinal Plants of the London, Edinburgh, and Dublin Pharmacopœias, with those lately introduced into Medical Practice, &c. By John Stephenson, M.D. and John Ross Churchill, Surgeon.

We can conscientiously recommend this work to the notice of the medical world; the plates are well executed, and the work promises to be one of great professional utility.

8. *Traité des Maladies de la Peau, &c.* Par P. Rayer; avec Planches, Pp. 688.

We shall notice this work in our next Number.

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| December. | Moons. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | | | |
|-----------|--------|-------------|--------|------|------|--------|---------|------------------|---------|--------|---------|------------------|--------|---------|--------|-------|
| | | | 9 A.M. | Max. | Min. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 9 P.M. | 10 P.M. | | |
| 20 | | | 42 | 43 | 38 | 29 | 79 | 29 | 42 | 93 | 95 | E | SE | Foggy | Cloudy | Rain |
| 21 | | | 39 | 41 | 33 | 29 | 56 | 30 | 00 | 91 | 85 | NNW | N | Cloudy | Fine | Fair |
| 22 | (| | 35 | 42 | 42 | 30 | 14 | 30 | 11 | 83 | 94 | NNW | WSW | Foggy | Fair | Cl. |
| 23 | | | 45 | 48 | 45 | 30 | 12 | 30 | 16 | 98 | 97 | W | W | | Cloudy | |
| 24 | | | 47 | 52 | 45 | 30 | 17 | 30 | 19 | 98 | 89 | WNW | NNE | Rain. | | |
| 25 | | | 46 | 46 | 42 | 30 | 22 | 30 | 25 | 96 | 98 | NNE | NE | Cloudy | | |
| 26 | | | 43 | 45 | 41 | 30 | 32 | 30 | 35 | 96 | 92 | NE | NE | | | |
| 27 | | | 42 | 45 | 34 | 30 | 41 | 30 | 43 | 89 | 85 | NNE | NNE | Fair | Fair | Fair |
| 28 | ● | | 35 | 40 | 34 | 30 | 39 | 30 | 37 | 85 | 89 | NW | NW | | | |
| 29 | | | 41 | 47 | 44 | 30 | 28 | 30 | 17 | 95 | 89 | WNW | WNW | Foggy | | |
| 30 | | | 45 | 49 | 42 | 30 | 10 | 30 | 11 | 89 | 93 | WNW | WNW | Fair | Fine | Fine |
| 31 | | | 45 | 49 | 45 | 30 | 09 | 30 | 01 | 96 | 90 | W | W | | Fair | Fair |
| 1 | | | 47 | 49 | 39 | 29 | 82 | 29 | 43 | 90 | 93 | W | WNW | | | Rain |
| 2 | | | 39 | 43 | 25 | 29 | 42 | 29 | 48 | 87 | 90 | W | WNW | | | Fair |
| 3 | | | 26 | 29 | 18 | 29 | 41 | 29 | 40 | 81 | 74 | W | W | | | Fine |
| 4 |) | | 23 | 30 | 28 | 29 | 58 | 29 | 70 | 74 | 90 | W | N | | s Snow | s Sa. |
| 5 | | | 29 | 30 | 28 | 29 | 97 | 30 | 18 | 94 | 87 | N | NNW | | Fair | Fair |
| 6 | | | 29 | 36 | 37 | 30 | 16 | 30 | 08 | 88 | 97 | N | SW | | Sleet | Sleet |
| 7 | | | 42 | 46 | 42 | 30 | 00 | 29 | 96 | 98 | 98 | SW | WSW | Rain | | |
| 8 | | | 49 | 50 | 38 | 29 | 87 | 29 | 67 | 98 | 98 | WSW | W | Cloudy | Cloudy | Cl. |
| 9 | | | 46 | 51 | 42 | 29 | 79 | 29 | 78 | 86 | 86 | W | WNW | Fair | Fine | Fine |
| 10 | | | 45 | 49 | 34 | 29 | 70 | 29 | 34 | 85 | 80 | WSW | W | | Rain | |
| 11 | | | 36 | 49 | 34 | 29 | 23 | 29 | 23 | 88 | 91 | W | WSW | Rain | | |
| 12 | | | 38 | 40 | 31 | 29 | 37 | 29 | 83 | 90 | 90 | W | W | Fair | Fair | |
| 13 | ○ | | 34 | 47 | 46 | 29 | 74 | 29 | 66 | 90 | 90 | WSW | SW | | Rain | Cl. |
| 14 | | | 51 | 53 | 33 | 29 | 29 | 29 | 65 | 84 | 76 | SW | W var. | Cloudy | Fair | Fine |
| 15 | | | 34 | 38 | 34 | 30 | 04 | 30 | 16 | 76 | 76 | NW | v. W | Fair | | |
| 16 | | | 43 | 48 | 36 | 29 | 92 | 29 | 90 | 91 | 97 | W | WNW | Cloudy | Rain | Rain |
| 17 | | | 38 | 41 | 35 | 30 | 13 | 30 | 15 | 85 | 86 | N | NNW | Fair | Fair | Cl. |
| 18 | | | 37 | 38 | 32 | 30 | 15 | 30 | 16 | 89 | 95 | ENE | NNE | Cloudy | | |
| 19 | | | 34 | 38 | 25 | 30 | 16 | 30 | 20 | 85 | 96 | ENE | E | | | |

NOTICES TO CORRESPONDENTS.

We are very much obliged to Mr. Bonner for his communication, of which he will see we have duly availed ourselves.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

. Communications, and Works for Review, are requested to be addressed (post paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

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No. 159.

MARCH 1, 1827.

VOL. XXVII

No. XXI.—NEW SERIES.—VOL. IV.

PART I. R E V I E W.

I.

ON THE AUTUMNAL FEVERS OF SAVANNAH.

Observations upon the Autumnal Fevers of Savannah. By W. C.
DANIELL, M.D., Savannah. 8vo. Pp. 152. 1826.

A PREVIOUS glance at the map of North America will give more interest to the present article than any remarks of ours upon the subject of it can be expected to do. The work before us relates to a form of disease which cannot be said to exist in this country, and modes of treatment in many respects nearly as foreign to us. Yet it is something to have a medical book from the neighbourhood of the Creek Indians, or at least from the extreme southern boundary of American medical literature, and from a country gained, almost within our own lives, from its original savage possessors. The schools of the southern have not yet had the advantages enjoyed by the northern and middle states; but we think we can discern even in this little publication indications of a spirit and intelligence well deserving of encouragement. The progress of new nations towards refinement, the attempts made by many of them to emulate older societies almost before they have recovered from a mere struggle for existence, should not be coldly regarded by countries reposing in security, and enjoying all the advantages of wealth. The dangers and difficulties which beset and destroyed the first and second Georgian settlers were hardly yet ended when the government of that state began to turn its attention to the encour-

VOL. IV. NO. 21.—NEW SERIES.

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agement of literature; and it is far from improbable, that the product of the seed thus early sown in the University of Georgia may be destined to extend its wholesome and productive branches, entwined with those of agriculture and commerce, even over the fertile but neglected plains of the Fighting Creeks and Chikkasahs.*

The preface to this little work is written with a singular appearance of candour, and represents the author as having for some time pursued the practice of his seniors with so little success as to have been driven to measures entirely opposite—measures which, as they were adopted from the conclusions of his own mind, have been adhered to through several years amidst the prejudices and calumny of his professional brethren; who, however, have been driven from their coverts by the force of public opinion, and have almost ceased to talk of inflammations of the stomach and bowels, caused by the fevers of Savannah, as well as of treating them by bleedings, blisters, drastic purgatives, and salivation. We merely copy these assertions, and have no desire to embroil ourselves in a medical war with the United States. Dr. Daniell's practice, he says, was, 'unfortunately for himself, 'larger than his experience authorised,' and guided by the opinions of those for whose experience he had a high regard; and although soon convinced that he was not in the right path, he had no time to seek a better: the result is related with much vivacity.

'The time soon arrived, however, which dispelled the delusion. About the latter end of August, and during September, there was a very considerable abatement of disease. This arose from an absence of subjects; for, towards the close of the latter month, several vessels arrived from Europe and the North. The seamen and passengers which they afforded very soon became sickly, and with them the fever assumed a much more severe and rapid character. Their numbers were increased from day to day by new arrivals. Here the disease ran its course in two to five and six days. Evacuants, even the mildest, could not be borne. There was, from the first, great debility. Blisters frequently failed to vesicate. Indeed

* A colony between the rivers Savannah and Altamaha was projected in England in 1732. The project was favoured by George II., in honour of whom the new province was called Georgia. The first settlers at Savannah were from our large towns or cities, many of them idle and useless persons at home, who did not improve abroad. To these, few of whom were successful, succeeded a number of Highlanders; but although a very different set of people, they were hardly more happy in their new country: the injudicious restrictions of the colony, the continual invasions of their restless neighbours the Creeks, and of the Spaniards, and many other causes, allowed them neither rest nor prosperity.

nothing appeared, even for an hour, to arrest the disease. It soon became obvious, that every attempt to salivate must be nugatory. It was at this time that I became first impressed with the importance of the *loss of tone in the skin*, and of the necessity of the adoption of some means to restore it. There was not time for much deliberation. I endeavoured to make blisters available by increasing the proportion of the flies, and by the addition of spt. terebinth., but with no advantage. The season progressed: disease and death thickened around us. The fevers manifested a direct and speedy tendency to prostration. To me it became evident that such speedy and constant collapse was the effect of a debilitating cause; that the fever originating in debility was perpetuated by it, and the system sunk under its direct influence. I could not conceive that any inflammatory disease, without obvious and palpable manifestations of a high excitement (none of which existed), could so speedily end in prostration. I sought counsel from some of the medical gentlemen of the place: with more experience (and, perhaps, more discretion, certainly with more caution), they professed to see no reason why we should doubt the efficacy of a system of treatment which was supported by the opinions of so many great men, and which had the authority and sanction of time. It was true (said they), that the disease is of a high grade, and many cases terminate fatally: that, they continued, is to be attributed rather to the severity of the fever than the want of virtue in the remedies. To my mind, all this was by no means satisfactory. Those who had confided in me were daily dying around me. They looked to me for a succour which I had not been able to afford them. I was humbled to the dust; for I felt my attendance amounted almost to imposture. If I had believed the disease to be absolutely incurable, my feelings would have been different. In a state of feeling, to which, even at this day, I cannot recur without pain, in several cases then under treatment, I resolved to abandon a practice which, at least in my hands, had achieved nothing; and I substituted an infusion of serpentaria with bark. This prescription was sent out in the evening. Though wearied and exhausted with the fatigues of the day, I felt that I could not sleep; I traversed my parlour in a state of mental anxiety, which I never felt before nor since, for several hours after midnight. I then sought my chamber; my dreams carried me to the bed-side of my patients, whom (who) I imagined were dying. I awoke but to repeat my horrible visions. Eventually the hour arrived when I could visit my patients. Their condition soothed my anxiety; for no evil had yet resulted from my tonic remedies. They were persisted in afterwards with decided advantage. In new cases, I resorted to them earlier; and my success with them, although not satisfactory, was infinitely greater than with any other remedies.—P. vii.

As Dr. Daniell represents his new method of treatment to have been received with much disapprobation, and yet to have seemed to him, after much further experience, to consti-

tute a most important improvement in practice as relates to the frequent fevers of the southern states, for which the treatment common in the northern, which had been generally trusted to, was by no means proper,—it may be worth while to see a little more fully the plan recommended by him; previous to which, however, it is highly necessary to know what kind of a disease the Savannah fever really is.

The city of Savannah, originally the capital, and yet one of the most populous places in the state of Georgia, is situated on the river of the same name, about twelve miles from the sea; the whole of the eastern part of Georgia is remarkably level, and the site of Savannah is not greatly elevated. Extensive rice lands on different sides of the city, subject to inundation by the ordinary spring-tides, have, it would appear, always given it an unhealthy character; and their diminution, by a system of dry culture, introduced nineteen years ago, has materially diminished the mortality. The city is built with great regularity; the streets intersect each other at right angles, and are very spacious,—and there are many squares; so that all parts of it, in consequence of this plan, and of its gentle elevation above the intervening flat country, are ventilated by breezes from the sea during the long-continued and debilitating heats of summer. The soil is sandy; but this character of it seems to have been singularly modified for the last seven years by the abundant rubbish occasioned by the great fire in the fatal year 1820, when this devoted city was not only visited by a dreadful conflagration, but, in consequence of the irruption of crowds of inexperienced and miserable whites, with the yellow fever in a most destructive form. The mortality in that year is given as 1 in 5 $\frac{1}{10}$ th; whereas, since the introduction of the dry culture system, and the establishment of a board of health, it has generally been not more than 1 in 34; and in one year, 1818, was only 1 in 62 $\frac{3}{4}$ ths. The rubbish, however, is now fast disappearing; and the sandy soil, which so conveniently absorbs the moisture in the level streets of Savannah, is again becoming very perceptible. The climate of the city in winter is very mild, and considered favourable to phthical patients. But it is in summer and autumn that the citizens feel the benefit of the 'dry culture' of the suburbs: in those seasons, heavy fogs, proceeding from the rice lands, used to penetrate the very heart of the city: these are yet seen occasionally rising from the lands still cultivated for the production of rice, but they now merely approach the eastern and western extremities of the city, and advance no further. This advantage has not been obtained without the difficulties usually attendant on improvements; and some of those interested in the valuable

cultivation of the rice have not scrupled to look upon the dry culture as a means of increasing the fevers of the country. The question is a most important one for all parties ; and the following facts, extracted from a Report of the Dry Culture Committee to the City Council in 1824, together with the decrease in the mortality, appear to us decisive of it.

‘ Previous to the introduction of the dry culture system, such was the humidity of the atmosphere of this city during the long flow upon the rice, that a person after being exposed for a short time at night, could wring water from the locks of hair hanging below his hat. Now, throughout the whole season there is a dryness and an elasticity of atmosphere, the very reverse of what existed previously. It will be obvious, that this great improvement in the sensible qualities of our atmosphere must be salutary to those who breathe it. Previous to the introduction of the dry culture system, the Bay was as notoriously the most unhealthy part of the city, as that portion of the city lying south of South Broad-street was then the most healthy. The reverse now obtains, and from causes equally obvious. The bay, from its proximity to the lands subjected to the dry culture system, is most immediately under the influence of that system; and its improved salubrity is one among the many unequivocal evidences of the agency of the latter upon the health of Savannah. Whereas, that portion of the city south of South Broad-street, formerly furthest removed from the cultivation of rice, has within the last three years been thrown more immediately under the influence of wet culture by the opening of an extensive rice field immediately to the south-west.

‘ Unimportant as at first it may seem, your committee cannot omit alluding to the greater appearances of health, as indicated by the countenances of our inhabitants during the summer and fall for the last three years. It is an evidence of a more vigorous health than before prevailed, even among those of our inhabitants who escaped positive disease. Nothing formerly was better calculated to impress upon the mind of a stranger arriving here in November, the melancholy character of our climate, than the blanched faces of our inhabitants. The remark is now general with those who have had opportunities of observation, that of late the faces of our inhabitants are quite as indicative of health as those of persons residing in cities to the north, reputed much more salubrious.’

Under the name of autumnal fevers, Dr. Daniell comprehends the intermittent, the remittent, the continued, and the yellow fevers, each of which, he says, in certain circumstances, assumes the type of the rest. According to him, continued fevers are not common at Savannah ; and all the autumnal fevers are modifications of the simple tertian. The remittent fevers are habitually most severe on alternate days ; or if not so, the exacerbation of one day will probably be in the morning, and that of the next in the evening ; ‘ thus

still assuming the tertian character.' Some cases of yellow fever occur every year; but it is very seldom endemic. The author has not very clearly expressed himself on the subject of the general character of the fevers of his country, and seems to us to be unjustly discontented with Sydenham and Rush for endeavouring to shew that the character of fevers varied in different years. No fact is perhaps more established than this; and in our country at least it has been particularly illustrated, and that in various parts of our island, even during the recent months of December, November, and October; during which, in the numerous examples of fever which have presented themselves, diarrhoea has been an almost constant symptom, superseding, as it were, the cholera and the common bowel complaints, which appeared when the moist autumnal weather succeeded to very prolonged heat and drought, and marking the epidemic very distinctly from those usually observed at the same season of the year. Dr. Daniell is certainly too easily satisfied, if he thinks that any observations he may have made in the space of four or five years can invalidate the testimony of the great authorities above mentioned, even although during that time the fevers of Savannah may have presented an uniform character, and the stomach or bowels may, as he states, invariably have exhibited the appearances common to *yellow* fever, and may have convinced him that, by dissection alone no distinction can be made between that disease and an intermittent or remittent.

Dr. Daniell has laboured in a very praiseworthy manner to establish a theory of fever; and after bewildering ourselves in the mazes of his reasonings for some time, we were happy to find ourselves after all merely involved in the ingenious theory of Dr. Cullen: this theory has served the turn of many a subsequent writer, and at least does no harm; whilst it has probably led to some useful points in practice: but we see no great utility that would attend a prolonged discussion on this subject. The principal circumstances, the collapse and the reaction of the circulating system, are palpable to all observation; and when authors begin to speak of the causes, they too often quit this secure position, and wander into erroneous reasonings, whither it is a pure loss of time to follow them. It is sufficient to state, that it is Dr. Daniell's opinion that the cause of the autumnal fevers of Savannah is marsh miasma, by which the capillary action of the skin is impaired, and the equilibrium of the circulation destroyed, that then the internal capillaries make an effort, and that this effort constitutes fever.

' The immediate tendency of the blood cast from the capillaries

of the surface, is to the spleen and liver. This is fully manifested in white persons habitually residing in the immediate vicinity of rice fields, and other low, marsh, or swamp situations, and especially when restricted to a scanty or chiefly vegetable diet. Such have very pale skins, with more or less emaciation, and enlarged livers and spleens, are habitually exempt from severe autumnal fevers, and are very liable to the acute diseases of winter. Theirs are mild intermittents, sometimes protracted for many months. They are also subject to a chronic feverish habit of body, which occasionally scarce yields to the cold of our winters. The enlargements of the liver are not so rapid as those of the spleen; nor do they usually become comparatively so enormous. Upon such subjects, the causes of fever operate gradually, and they become in some measure habituated to their influence. To a person at all attentive to this subject, the aspect of an individual is sufficient evidence of the character of his residence; and that is equally indicative of the condition of his liver and spleen, and especially of the latter. As the blood recedes from the surface, it accumulates in these viscera. Its gradual recession enables them to receive it as it is cast in upon them; hence, there is not at one time a sufficient volume of blood thrown suddenly upon the circulating vessels to excite severe fever, and the gradual adaptation of the internal capillaries to these excesses of blood impair their powers of reaction, and lessen their resistance to it. Hence, as above remarked, such persons are chiefly subject to mild intermittents, or remittents, or, what is perhaps much more common, chronic feverish habits. In such, whatever may have been previously the condition of the liver or spleen, these now become enlarged in the progress of these fevers, and especially the latter; and with such immediate enlargements there is at least an abatement, sometimes a subsidence of the disease. These enlargements I frequently predict to my patients. When the enlargement of the spleen is very considerable, a chronic feverish habit is apt to ensue. In such cases, it would appear that there is a constant effort in the spleen, produced partially by its contractile power, but more by the action of the abdominal muscles and diaphragm, and the mechanical influence of the other abdominal viscera, to relieve itself of the excess of blood with which it is charged, by throwing it into the general circulation. The reaction in the capillaries of the spleen and liver then operates upon the external capillaries, and the feverish habit is the result of this struggle between the two capillary systems.—P. 54.

The effects described in this passage are, according to the author, less frequent when the cold weather comes on. He strongly objects to the very prevalent opinion of the autumnal fevers having what is called a bilious character, although we cannot but think that some of his own observations greatly tend to prove its existence: we should not, however, be justified in denying, that some of the appearances commonly attributed to the predominance of this bilious character are in

reality produced by the very free employment of purgatives. Passing over a good deal of discussion concerning the effects of food and climate, in preserving from, or producing disease,—we extract the following description of the autumnal fever of Savannah, as the best introduction to an account of the author's practice.

The first impression to the sensations of the subjects of the cause of autumnal fever (be its nature and manner of application whatever it may) is perceived in the skin. The second is a vitiation of the taste. This sometimes, and especially in mild cases, exists for several days. If the indication be now regarded, the disease may be prevented. Afterwards follow pains in the head, loins, and deep-seated bones, nausea, occasional gripings, sense of lassitude, thirst, &c. The appetite, which before had been impaired, becomes not unusually very keen just before the supervention of the disease. This is attributable to the accumulation of blood in the capillaries of the alimentary canal; in consequence of which there is probably an increased secretion of gastric juice. This increased desire for food is frequently in a ratio with the severity of the impending attack. Certain it is, however, that it more constantly precedes severe than mild cases of fever. Upon the supervention of the chill, as already remarked, the surface is inelastic and shrunk, the skin on the hands and feet becomes wrinkled, and palpable pits, especially in the extremities, follow the pressure of the fingers upon the skin, which loses its carnation appearance, and becomes more or less coloured with the venous blood, which would seem to loiter in the capillaries. Pains are felt in the deep-seated bones, from the undue determination of blood to them, as remarked by Rush. The respiration is oppressed with frequent sighings; from a similar cause, a sense of fulness is felt in the abdomen. As the chill advances, nausea is induced,—frequently followed by vomitings or retchings, which usher in the hot stage, which may be considered as the result of a reaction in the internal capillaries to relieve themselves from the accumulation of blood upon them. This struggle between the two antagonising systems of capillaries is made through the circulating vessels, and produces the disordered action observable in the pulse. Sometimes, from want of power in the internal capillaries, the reaction is not adequate to the restoration of heat to the surface; and then the disease in many cases speedily terminates fatally. In these cases, upon examination *post mortem*, great accumulations of blood internally are observed. Here there is great restlessness, and great complaint of internal heat. Such subjects after death decompose very rapidly, owing to the accumulation of heat attendant upon the blood internally. At other times, the external capillaries yield more rapidly, and the paroxysm terminates in perspiration. In some instances, the external capillaries yield so far to the reaction as to become the passive conductors of the serous parts of the blood, which then pass off profusely through the pores. This perspiration is profuse and

clammy, and always unfavourable. In almost every case of fever that terminates unfavourably, there is this character of perspiration at some stage. Here the surface is cool, if not cold; and the evaporation of the perspiration subtracts further from the heat of the system, already below the healthy standard. Occasionally, there appears to be a fixed resistance in the external capillaries, and a protracted reaction in the internal. In such, the skin is constantly hard, dry, rough, and very usually yellow, with occasional petechiæ. The adnata of the eye is yellowish and watery, with its internal vessels deeply injected with blood. The remissions are imperfect, and frequently in the course of the disease disappear. The stomach is usually but little affected with nausea. The bowels are disposed to costiveness; the urine is straw-coloured. There is occasional slight delirium; the sleep is disturbed; the fever becomes chronic; the pulse is quick and frequent, with some degree of hardness; the teeth are covered with a dark sordes; the patient's flesh gradually wastes away; the pulsations in the abdominal aorta are observed through the covering of the patient, who is now very peevish and irritable; his appetite and thirst become pretty constant, and he dies at the termination of from fifteen to thirty days, usually comatose, and in a state of extreme emaciation. Previous to his death, there is a great disposition in the skin to the production of sores, upon which thick scabs form. I have never had an opportunity of examination after death from such fevers; but I have but little doubt, that the morbid appearances are substantially the same as in other cases of death from our fevers.*

* I should have remarked before, that occasionally there is a suppression of urine in some cases; in others, a mixture of blood and urine; and occasionally, with very little or no urine, there are frequent discharges of almost pure blood from the bladder. The suppression of urine I have supposed attributable to a condition of the kidneys, similar to that of the liver, when in fevers there is a suppression of bilious secretion, namely, an engorgement of blood overpowering the capillaries. Sometimes this engorgement is partially relieved by the discharge of blood, with or without urine, following a passive condition of the capillaries. Under a similar condition, and when there is a suppression of bilious secretion, there is frequently a discharge of heavy matter, assuming more or less the character of gross, bilious, or earthy powder, and bearing some resemblance to sand. In such cases, the kidneys seem to perform partially the secretory function of the liver. This excretion of gross, bilious, and earthy matter has been confined, within my observation, to the latter stages of the fever, and the first of convalescence; and may be deemed rather the effect of great debility of

* Upon seeing this remark in MS., Dr. Screven informed me, that he had examined the body of a patient who exhibited the above train of symptoms, and that the *post mortem* appearances were similar to those which are seen in persons who have died under the ordinary circumstances of autumnal fever.

the kidneys, produced by their previous engorgement, than an indication of active disease.

‘ There is occasionally an enlargement of the parotid glands attendant upon fever: I have never known recovery to follow such enlargement; and where it has taken place within my observation, delirium and a long-continued coma have preceded death. This enlargement of the parotid gland has frequently been mistaken, and attributed to a mercurial influence.’

We have quoted sufficient perhaps to shew the nature of the disorder, although the description is far too diffuse, and greatly overburdened with what ought not to enter into a description,—theoretical views of the appearances. It would have been much more satisfactory and instructive, if the result of the dissections, which it would appear the author has had opportunities of making, had been more fully stated.

The inflammatory character of the autumnal fevers of Savannah, which is maintained by numerous authorities, is denied by Dr. Daniell; and he justifies this dissent from the opinions of former writers by several arguments. The contrary opinion is supported by the alleged state of the pulse and the blood, by the success said to attend a depleting plan of treatment, and by the appearances after death. With respect to the first of these circumstances, the author thinks the indications to be taken from it not to be depended upon; and the success of the depleting system he totally denies. As regards the appearances after death, he maintains that they are not the effects of inflammation, but of simple accumulation, or engorgement of the capillary veins; and the latter condition is, he thinks, strongly exemplified in the villous coat of the alimentary canal, from whence the advocates of inflammation have sought for their proofs.

‘ Upon opening the stomach of a person recently dead of autumnal fever, the internal surface presents a dull red appearance in one or more points. Upon exposure for a short time, this dull red becomes more florid, and undergoes a similar change with that produced by exposing venous blood to the atmosphere. My attention was first called to this fact, and its inference, by Dr. James P. Screven, of this place; to whose intelligence and judgment I have been repeatedly indebted for valuable suggestions and profound opinions, whilst in the prosecution of these inquiries. Examined more attentively, this red appearance is found to be the effect of numerous points of red, distinct and wholly independent of each other, thickly grouped together. This is more obvious when the villous coat is detached from the others, and held between the eye and the sun. In other parts of the stomach, these points of red are frequently found sparsely spread. The small veins running between the villous and adjoining coats are found filled with blood, and the

capillaries into which they ramify in the villous coat are found very partially injected with blood. To the naked eye, when the villous coat is detached, and interposed between this organ and the sun, it is obvious that these small red spots are produced by particles of red blood detained in minute capillary veins, which are distinctly seen, and may be traced to the larger trunks into which they enter. If a portion of the villous coat be separated from the nervous with a knife, and rolled up, and further portions detached by winding it upon itself, and then spread out, the red appearance which it had previously exhibited will have disappeared, and small portions of the blood will be found on the side which had been next the nervous coat. The rolling of this coat upon itself, in the process of detaching it from the other, had pressed the blood from the capillary veins. This fact suggested to me the idea of removing the red appearance by gentle and regular pressure of the finger, which was readily effected. Indeed, so easily are these specks destroyed, that care is necessary in detaching the villous coat, lest they be impaired or entirely obliterated; in which latter event there will be no appearance of red remaining in the villous membrane. These appearances, as before remarked, are always found in the stomach of those dead of our fevers; frequently in the intestines; most commonly the duodenum; next in the small, and occasionally in the large intestines. They are also found in all the other mucous membranes. Dr. Screven's observation assures him, that the red appearances in the bladder are most extensive in cases where bloody urine has been passed. I have never been able to discover them in any of the serous membranes.

‘I have taken great pains in these examinations to ascertain fully the condition of the capillary arteries; and am fully satisfied that they are constantly empty, and that the red appearance solely depends upon the blood in the capillary veins.’—P. 83.

In addition to this evidence against the existence of inflammation in the fevers of which he treats, Dr. Daniell observes, that the most plethoric patients, in whom an inflammation would most require evacnants, soonest sink under their employment in this fever; and, further, that he has always found good effects to arise from measures increasing rather than diminishing the heat of the patients, so as to convert the remittent into a continued fever. In short, he considers the autumnal fever to be from the commencement a disease of debility. We shall offer no opinion on this subject, having never ourselves had an opportunity of seeing the disease in question; nor shall we endeavour to invalidate the reasoning of our author, supported as it is by signal practical success, arising from measures founded on the opinions he entertains. The fact of the appearances in the stomach and intestines being produced by congestion, and not by inflammation, may not seem conclusive against

bleeding; but what are we to oppose to a statement of the happiest results effected by a treatment diametrically opposite? The American practitioners may think Dr. Daniell's book deserving of notice, or a refutation, and we must leave the subject in their hands. No disease has been written about with so much warmth, and consequently with so little reason, as the yellow fever. Its cause, its character, and of course its treatment, have all been vehemently discussed; and it is to be feared, that few writers on these questions have yet appeared whose works were the result of calm and candid observation, and not designed to support or to attack the dogmata of a party. The use of calomel, or its condemnation, in this disease, have apparently often originated in the prevalence or disregard of the notion of the bilious nature of it; and although we are not illiberal enough to cite Dr. Daniell in illustration of a remark which he makes himself, we find him not only discrediting the bilious doctrine, but condemning the mercurial treatment. We are not quite prepared, with the author, to assert that what has been termed the 'silent influence of mercury upon the system' in yellow fever, is more fully recorded in the 'bills of mortality' than any where else; but we must say, that the evidence in favour of salivation in this disease is by no means satisfactory, and that we are much disposed to think it useless at least, if not hurtful, in any case of fever; although we know there are practitioners who think very differently. We have frequently had occasion to observe the complacency with which men give those medicines which they have long been accustomed to give; and how unobservant they generally are of their effects. If the operation of old medicines was watched with the same care as that of new remedies, we do not say our general faith in medicine would be diminished, because we believe, on the contrary, it would acquire a better foundation; but we should undoubtedly regard many articles of the materia medica in a very different light from that in which we view them at present.

Dr. Daniell's treatment of the autumnal fevers is founded on two principal indications, namely, to 'diffuse the circulation equally throughout the whole system,' and 'to give tone and energy to that diffused action of the vascular system.' The means chiefly employed by him are the application of sinapisms to inflame the skin, and the administration of capsicum and serpentaria, with or without bark; and he sometimes employs the sulphate of quinine, and Fowler's arsenical solution. The inflammation of the skin by sinapisms he seems to look upon as a means of the first importance with a view to fulfilling the first indication; and the medicines just

now enumerated are given to accomplish the second,—which can, however, in his opinion only be done with certainty in cases where the skin has been in some parts fully inflamed by the sinapisms.

Of the powers of the capsicum annum, the author speaks in very high terms of praise; he considers it to possess a peculiar power independent of its stimulant and tonic properties; and he gives it in the form of infusion, in the proportion of a table-spoonful of the Cayenne to a pint of boiling water,—a wine-glassful of this infusion being taken every hour, or oftener. It exerts the most powerful influence in tranquillising the stomach; and Dr. Daniell has repeatedly known it to suppress the black vomit.

The observations on the powers and proper application of the other mentioned medicines are so loosely given, and with so little attention to arrangement, that it is really difficult to give any thing like a condensed account of them. The following passage seems to contain, however, more connected directions than the rest:—

‘Frequently two or more paroxysms of fever have occurred, or several days have elapsed since the supervention of the disease, before the attention of the physician is required; during which time frequently, in addition to the mere effects of the disease, detriment has been derived from the injurious use of active evacuants, or some other improper medicine. Under every circumstance, the first application should be sinapisms, as before remarked. If there exist much disposition to vomit, or severe retchings, the Cayenne pepper tea should also be directed; and as little diluted as may be, according to the emergency. Ordinarily, however, and where there is no great urgency, the patient is directed to abstain from all things else until the sinapisms have performed their office, when, according to the indications, the other medicines are to be administered.

‘I have already alluded to the usual production of evacuations by the surface, kidneys, or bowels, by the first application of sinapisms. This is more common and remarkable where the patient has been allowed to remain several days without treatment. Upon the succeeding application of the sinapisms, these evacuations are not ordinarily so copious. It is questionable, if, when at all serviceable, they ever fail to induce some evacuation. Their influence upon the bowels is very remarkable. I am frequently urged by patients, who imagine they feel some uneasiness from the supposed want of a stool, to give a purge. My answer is, that upon the supervention of the next paroxysm or exacerbation, the sinapisms will be used, when the bowels will be sufficiently moved; and it is indeed rarely that I am disappointed in my anticipations.

‘The moderate evacuations caused by sinapisms when the system is oppressed, are certainly salutary, and aid, by reducing somewhat the volume of blood, and by leaving the blood-vessels less embar-

rassed, in restoring an equalised circulation. Where the sinapisms are applied to the skin in cold clammy perspirations, tone is imparted to it; the perspirations are checked, and the bowels usually moved. Pretty free purgings sometimes follow the application of the sinapisms; in all such it will be found that the evacuations are highly unwholesome and offensive, and not thin and watery, as when caused by active purges.

‘Where the skin is rough, dry, and hot to the feel, when, although there may be occasional vomitings, there is not usually severe gastric distress (for with the latter there is usually more or less moisture of the surface), the pepper and serpentaria are early administered, with sinapisms,—because they have a powerful tendency to aid in the improvement of such condition of the surface. If, however, there should be severe pain in the head, delirium, or tendency thereto, the serpentaria should be withheld, and the pepper given alone. After the head has been relieved by the inflammation of the skin, the serpentaria may be safely and advantageously given. The infusion of this article, given cold, is by no means so apt either to affect the head, or promote perspirations, as when hot. It is equally improper to administer the serpentaria when there is an undue tendency to moisture of the skin, or cold, clammy, or profuse perspirations. When any, or all of these, exist, the Cayenne pepper is highly serviceable in aiding to arrest them. To this, the bark may be advantageously added, as soon as the skin has been fully inflamed, and the system begins to react; until which its use is injudicious. I have frequently given bark previous to such reaction, but never with advantage. Given freely, during the apyrexia, where sinapisms have not been previously used, it frequently offends the stomach, and disgusts the patient; where, however, it is retained, it almost certainly embarrasses the stomach upon the supervention of the succeeding paroxysm. Where the skin has been extensively inflamed, bark, serpentaria, and Cayenne pepper, may be safely and advantageously given in every after stage of the disease.’—P. 132.

In the opinion of the author, the state of prostration so often observed in this form of fever generally admits of relief when neither the depleting nor the evacuating system has been primarily acted upon in the treatment; and in this state his reliance is wholly placed on the sinapisms and Cayenne pepper, energetically applied and administered. Ardent spirits do not appear to be serviceable; and although it is observed, that habitual drunkards usually enjoy an immunity from the autumnal fevers, yet, when they do become subjects of it, they seldom survive. Purgative medicines are strongly objected to by Dr. Daniell; but he does not extend his objection to mere evacuates. The use of emetics seems to be rather detrimental than advantageous. In conclusion, Dr. Daniell observes, that the success of the treatment he recom-

mends depends wholly on the skin being first fully inflamed in some parts, and upon the inflammation being kept up throughout the whole course of the disease.

Upon the treatment of a disease varying in form and course, if not in its nature, from what we observe in this climate, we shall not venture any criticism. The plan of the author is certainly energetic; and we have his assurance that it is successful. The literary pretensions of Dr. Daniell's work are not very great. We do not object much to the use of the word *progressed*, nor would it be liberal to find fault with an American writer for preferring the French word *grade* to the English word *degree*, that being a very common affectation of medical writers in this country; but we cannot admit the propriety of speaking of an impression to the senses, or of saying that the skin is 'hot to the feel.' In the habitual carelessness of conversation, such expressions may pass, but their admission in writing cannot be defended. We must also remark, that we never saw so small a book written with so little order and arrangement; and that the faults of punctuation are so numerous and so whimsical, that we can only suppose them to have been added at random by somebody who could not read.

II.

TREATMENT OF PROTRACTED CASES OF INDIGESTION.

On the Treatment of the more Protracted Cases of Indigestion. By A. P. W. PHILIP, M.D., F.R.S. L. and E., being an Appendix to his *Treatise on Indigestion*. 8vo. London, T. and G. Underwood. 1827.

It is well known that Dr. Wilson Philip has published a very useful book upon indigestion, in which, though little novelty is contained, there is a considerable improvement in the general view of the affection. Dr. Philip gives himself credit, indeed, for 'an improved plan of treatment;' but as we were familiar with the principles he has laid down, and had frequently seen them acted upon, long before his work was published, we apprehend that he labours in this respect under some mistake. We nevertheless have always regarded the volume on indigestion as very valuable, because it has made the proper method of treating this disorder more extensively known than it was before; and has particularly impressed the necessity of attention to the inflammatory stage. To this work, which has now gone through five editions, he has added an appendix, in the form of several

distinct essays, 'on the different points to which he conceives the attention of the practitioner ought to be directed.' Previous to entering upon the first essay he has made some observations upon the misinterpretations of Dr. Paris and Dr. James Johnson, with regard to some part of his doctrines. It is unnecessary, however, to follow him here, though it certainly seems that these authors have perused his former treatise with very little attention.

The word 'indigestion,' as employed by Dr. Philip, has a much more extensive import than what has commonly been assigned to it, and comprehends not only the first inconveniences experienced in the *primæ viæ*, and the temporary symptoms conjoined with them, but the whole constitutional disorder, from mere functional derangement to its termination in morbid change of structure. In thus extending the signification of indigestion, he has trod in the same path with Mr. Abernethy, in his *Essay on the Constitutional Origin of Local Diseases*; and the observations of these two eminent men reciprocally confirm the opinions of each other.

Indigestion, thus explained, is divided by Dr. Philip into three stages: the first being that simple disorder which has always been acknowledged as originating in imperfect digestion, as flatulence, eructation, languor, emaciation, &c., without any organic disease; the second being characterised by tenderness or other uneasiness on pressure in the part of the epigastric region, and a degree of hardness in the pulse, often accompanied by other febrile symptoms; and the third stage is when organic disease is already established.

For a detail of the symptoms in each of the two first stages, we must refer to the work itself; and in the present review we shall confine ourselves to the consideration of some of those points which are noticed in the appendix. We shall only premise, that regimen and diet are of more efficacy in the first stage of the disease than medicine; and that a strict attention to them will frequently suffice alone for the restoration of health. The observations on diet in the *Treatise on Digestion*, we believe to be tolerably accurate; and our own experience abundantly confirms the doctrine of Dr. Philip respecting broth: 'all kinds of broth are apt to become sour on a weak stomach.' Some fluid is of course necessary, but dyspeptic patients very ill bear even a small quantity; any thing beyond what is sufficient to moisten the food, has often appeared to us injurious. We are disposed to impress this point the more, because we have known it a common practice among medical men to withdraw solid food entirely in cases of indigestion; and this has been continued so long, that a return to solid food is of very difficult accomplishment, the

smallest portion exciting much uneasiness, and sometimes even pain.

The first essay in the Appendix is entitled, 'On the Examination by Pressure on the Regions of the Stomach and first Intestine.' There appears to be some misapprehension in some of those authors who have remarked upon this phenomenon; and they seem to imagine that the tenderness is the consequence of *severe* pressure, originating in fact from the mode of examination, and forming no part of the real disease. We speak of course under some limitation. What may be the degree of pressure employed by Dr. Philip, we have had no opportunity of ascertaining; but we can scarcely think it possible that any practitioner can confound the inconvenience arising from pressure with the tenderness dependent upon local disorder. That many patients may shrink upon even slight pressure, is true, but the countenance exhibits very different appearances, according both to the nature and the degree of tenderness. Moreover, if but a little patience be employed, we shall find that should the inconvenience proceed only from pressure, it will disappear by continuing it; whereas, should there be a morbid sensibility, the pain rather increases, never diminishes. To this, it may be added, that unless the tender spot be very deeply seated, slight pressure only will be necessary, such as could by no means, under a healthy state of the parts, produce the slightest inconvenience: and another observation also to be made is this, viz. that the tenderness is confined for the most part to a particular spot, while the pressure may be employed over other points of the abdomen, without causing any uneasiness, which could scarcely be, were the pain attributable to the pressure merely. Dr. Philip has observed, that the experience of every additional year has made him more sensible of the importance of examining the situation of the pylorus and duodenum, since here there is most frequently a morbid tenderness, which, unless submitted to local treatment, invariably maintains and aggravates the dyspeptic symptoms. We believe that all who will attentively and candidly consider their own experience, will agree in this opinion. In the second stage of indigestion, it is never enough to recur merely to the general indications, the local affection will always require local treatment.

When pain is experienced in the region alluded to, there is in general also much fulness; and the right side is more prominent and firmer than the left. This, as Dr. Philip remarks, has been too frequently referred to an affection of the liver; and the mode of cure pursued has been directed upon this supposition. We have had occasion to know, that with

many practitioners this kind of liver disease, which in truth is no disease of the liver at all, is a very frequent occurrence, and mercury in all its forms is most liberally administered. It need scarcely be said, that such treatment is most wretchedly unsuccessful, the diagnosis is incorrect, and success can happen only by chance. That to the duodenum this fulness and tenderness is in great measure to be attributed, our own experience would have inclined us to believe, without the testimony of Dr. Philip; but the facts he has brought forward, and the satisfactory manner in which he has described them, so concordant with daily experience, scarcely leaves room to doubt, excepting to the most determined caviller.

We shall not, however, we trust, be deemed by the author to participate in a spirit of hypercriticism, when we say, that though what he has stated is in great measure correct, it is not altogether so; but that the pain and tenderness in the right side may proceed from affection of the colon, as well as of the pylorus and duodenum. It is true that Dr. Philip has mentioned at some length the affection of this bowel, when the pain is in the region of the stomach or of the sigmoid flexure of the intestine; but he has not referred to it as being the site of tenderness in the ascending branch, or as it turns to form the transverse arch. In both these situations, however, we have had frequent reason to suspect disease; and some of the most distressing cases of indigestion that have fallen under our care, have, as it appeared to us, had their principal seat in this part of the alimentary canal. For the means of distinguishing affections of the stomach from those of the colon, Dr. Philip mentions the more complete performance of the earlier part of the process of digestion, and the more or less perfect relief afforded by evacuations, which are generally preceded by an increase of tenderness. It will, however, often happen, that the stomach and the colon shall be affected simultaneously, and thus the diagnosis will be rendered more difficult than when either is disordered separately. Under these circumstances, it will be frequently possible to arrive at tolerable accuracy by tracing the course of the bowel, and ascertaining whether the pain extends in its direction; and sometimes where there is much borborygmus, the pain is observed to change its situation as the different parts of the bowel undergo contraction. In this last case, however, it may be said that the pain is entirely spasmodic, and different therefore from the inflammatory irritation mentioned by Dr. Philip. To a certain extent, this is undoubtedly true; but at the same time, some one point will be always more readily affected than another, and be referred to as the principal seat of disease, from which

the general tenderness is derived. With this state of tenderness, whether confined to the stomach, the duodenum, or the colon, the author of the present treatise appears disposed to maintain, that a certain tightness of the pulse is conjoined, indicating the presence of an inflammatory action. To this doctrine we are inclined only partially to assent; for we feel convinced, that there are many cases of local pains in the abdomen attending upon indigestion, which are neither accompanied by a sharp or tight pulse, nor curable by common antiphlogistic measures. It is true, that in the very great majority of cases, the fact is as it has been stated by Dr. Philip; and local bleeding will suffice to subdue or to relieve it. There is, however, a state of irritation of the colon which exhibits nothing inflammatory in its nature, and which has often appeared to us rather aggravated than relieved by leeches and counter-irritants. The individuals most subject to this peculiar uneasiness are young women, from sixteen years of age to thirty; and the seat most generally affected is either the caput coli and its immediate neighbourhood, or the sigmoid flexure of the same intestine. We have most commonly met with it in dress-makers,—some of whom have been compelled to leave their occupations on account of it. When the pain is confined to the right side, they often experience a sense of dragging, and complain of inconvenience, occasionally arising even to pain, upon moving the arm. Frequently, also, there is pain at the base of the scapula. The countenance is seldom much affected; nor have we ever noticed a jaundiced state of the skin, or any other symptom that would lead to the suspicion of hepatic disease. In many cases, there is not the slightest fulness of the abdomen in any one point; and in one of the most obstinate cases that has fallen under our notice, the bowels were so empty that by a very little pressure the vertebræ could be perceived.

The duration of this painful state is very uncertain; but several instances have occurred to us in which it had been more or less experienced for three years.

Hitherto we can only confess our ignorance of a successful method of treating it. Leeches and blisters have frequently increased the constitutional derangement, without affording the slightest relief to the local affection; and purgatives invariably aggravate tenderness of the intestine.

The second essay is entitled, 'Of the Organs of Waste in Indigestion;' and Dr. P. commences it with remarking, that 'it very frequently happens in the second stage of indigestion, that when the disease begins to yield, the patient gets thinner, whether he has been losing flesh previously or not, which

arises from the organs of waste being the first to regain their due action.'

We were at first somewhat surprised at this observation, and could not recollect any instance in our own practice where such an occurrence had had place. On reading, however, a little farther, we discovered that Dr. Philip alludes to that bloated and unhealthy bulkiness of the body in which the system is rather puffed up and bloated than really over-nourished. The secretions in these cases appear imperfect throughout the whole animal economy, and the fat thrown out is of a medium consistency between actual health and œdema. The countenance exhibits in fact that appearance which has been termed leucophlegmatic. The loss of blood, therefore, in this case, is not, we apprehend, a true loss of flesh, but rather of this unhealthy secretion, arising perhaps not so much from 'the organs of waste being the first to regain their due action,' as from the secerning vessels regaining theirs, whence fat more perfectly elaborated, but smaller in quantity, is laid down. The immediate consequence of this is a diminution in bulk, because even should the absorbents exert no more than their usual energy, the supply being less than before, the size of the body must decrease, though the muscular system is actually at the very same time upon the increase. Under these circumstances, therefore, the loss of bulk must certainly be regarded as a favourable symptom. The explanation we have offered of this phenomenon may appear superfluous, because the fact being allowed, the indications of treatment remain the same. It is, however, more consonant to our general knowledge of the absorbent system; for hitherto no proof has ever been adduced of its energy being diminished in disease. On the contrary, it acts with apparently increasing energy as the general system becomes weaker, and even remains active when all the other functions of life have ceased.

The loss of bulk can only be considered favourable, as we have stated, when it is attended with increase of strength, or at least without its diminution. But when an opposite progress has place, and the strength diminishes, the disease will generally prove extremely difficult of cure. Dr. Philip, justly considering this symptom as one of much importance, enters into an examination of its causes, some part of which we extract.

'It evidently arises from several causes, but I believe chiefly from the following. All causes of irritation tend more or less to excite a feverish state. Hence the tight pulse, and frequent occurrence of some feverishness, particularly towards evening, in the second stage

of indigestion, one of the most severe and obstinate causes of irritation. The tight pulse, indeed, which is always present in a greater or less degree at this period, constitutes itself a certain degree of feverishness, and, when considerable, is accompanied with all its essential symptoms. The vessels, in consequence of the continued irritation of the most sensible nerves of our frame, are excited to embrace the blood more strongly than in health; hence the tight pulse. Now this state, although a morbid one, tends for the present to support the strength, and we know, when in the extreme, will even give a preternatural degree of strength. I have repeatedly been consulted by dyspeptics, who said that the most unaccountable peculiarity of their case was, that they never felt tired, but felt as if they could walk for ever. This, so contrary to what is usual in indigestion, arises from peculiarity of habit; but strikingly illustrates a point of great importance in the nature of the disease. In such patients, the nerves are so braced by the tightened circulation, as not only to obviate the usual debilitating effects of the irritating cause, but even to give a preternatural vigour.

‘ Could we suddenly relieve the dyspeptic from the causes of irritation to which he has been so long subject, by at once removing his disease, he would feel a depression of strength, till the nerves had accommodated themselves to the change. The tightened state of the circulation would be relaxed, and the effect of this would be increased by the secreting surfaces, which were bound up, beginning to separate more freely their various fluids, and also by the alimentary canal being less distended with flatulence, and a collection of undigested food, which, however injurious, for the time gives tension, and therefore tone.’

The direct inference from this reasoning is precisely that which has been long confirmed by experience, viz. that dyspeptic patients ill bear any sudden change in their habits. However injurious may be the tendency of stimulants, to withdraw them suddenly is even more prejudicial. It has not unfrequently occurred to ourselves to see patients who had been thus treated. All stimuli had been forbidden to individuals who had been accustomed to take them in great excess. The result was so quick and complete a prostration of strength, as really to deserve the epithet of frightful. Every function seemed about to cease at once, and the patient passed rapidly from one fainting fit into another. We are the more inclined to press this circumstance upon our readers, because, if we recollect rightly, Mr. Howship has inculcated a contrary practice, and maintains that he has never seen any ill effects to proceed from a sudden change from a highly stimulating to a mild diet. That he may have met with such instances, is not improbable; but they are certainly exceptions to the general rule.

Another cause of the depression in the commencing treat-

ment of dyspepsia, is the impossibility of relieving cases of long standing, 'without some of those measures which more directly soften and relax the secreting surfaces.' These measures are of an antiphlogistic kind, but require extreme caution and sagacity in employing them. Without recurring more or less to their employment, it will be often found impossible to make any impression on the disorder, and yet a very slight excess in depletion will induce the most obstinate hysterical affection. It is also no unusual consequence of bleeding, especially if it be general, to induce an increased flatulence, but which is usually very transitory; and if the inflammatory tendency be sufficiently overcome to admit their administration, readily yields to the use of tonics. The following remarks of Dr. Philip so perfectly coincide with the result of our experience, that we would particularly recommend them to the attention of our readers.

'The difference in the manner in which different individuals bear the changes necessary to recovery, in advanced states of the disease, is very remarkable. In some, the habit may be quickly altered, with but little depression of strength; while in others, it requires all the attention of the physician to prevent a considerable degree of it—such is the difference of constitution. The treatment should be regulated accordingly, and any great degree of depression prevented.

'The physician may overlook the essential change which takes place in the progress of indigestion, and constitutes the difference between what I have called the first and second stages; but it is impossible for the patient himself to overlook it. We constantly find dyspeptics declaring that the stimulants which used to relieve them seem now to do harm; and that they cannot continue their use for many days together, although the sense of depression which they feel on abstaining from them, still impels them to return to, and even to increase them, by which they never fail to aggravate the disease. They are taking a course exactly the reverse of the only one which leads to health.

'In this dilemma, it is common to recommend change of scene, a mild and nutritive diet, mineral waters, and no more medicine than the patient finds absolutely necessary; and there is a great deal of good in all this; but in a very large majority of such cases these means prove ineffectual. The cure is then said to be hopeless, and the patient must use the means which his experience tells him suit him best, and make himself as comfortable as he can. In such cases, a permanent cure can generally be effected by no other means than simply removing the tight pulse and bound state of the secreting surfaces, by gradually weaning the patient from his stimulants, at first rejecting the more powerful, and combining the milder with those means which, without acting as stimulants to the stomach, already too much stimulated, both by the disease and the means

employed for its relief, excite the organs, to which the debility, originally confined to the stomach, has now spread ; in consequence of which the system is neither receiving what it ought to receive, nor throwing off what it ought to get rid of ; and thus the disease, in one of its most distressing, and in by far its most obstinate form, is prolonged.

‘ When this necessary change of measures produces depression, the remedy is simply to make it by slower degrees, to make the dose of the alteratives extremely small, and to retain as much of the tonics as will not materially interfere with the only means of restoring health.’

Excess in diet is yet another source of this depression ; and, excepting where very high-seasoned dishes are eaten, we believe the quantity to have much more effect than the quality of food upon dyspeptic patients. In the treatise to which the present small volume is only an appendix, Dr. Philip has entered at considerable length into the different qualities of dietetic articles. It is not, however, the part of the volume which is in our opinion the most useful ; and it is quite impossible that it can be founded upon data universally applicable : for, in the first place, no two stomachs will digest the same food with equal ease,—nor will the same stomach, even in apparent health, at all times enjoy the same digestive energy. In the second place, by some delicate stomachs the less digestible food will be more readily assimilated than food more generally digestible. Thus many instances have fallen under our observation, in which lobsters and other shell-fish have been commonly eaten without inconvenience, though the same individuals have been easily disordered by common aliment, though taken moderately. We do not certainly mean to contend, that there is no difference in aliments themselves ; or that there are no general rules by which medical practitioners may direct their patients ; but that our knowledge of the various kinds of food is not so precise as to enable us to distinguish accurately between articles of the same nature. To say the truth, we do not believe that mutton is more digestible than beef, or venison than mutton. We scarcely care whether our patients take turkey or common barn-door fowl ; and we are not very anxious that they should prefer partridges to pheasants, or woodcocks to wild ducks. Neither do we believe, that there is much difference in the digestibility of fish, provided they are eaten simply, and without their usual accompaniments of butter and rich sauces. But we do believe, that one and all of these are capable of doing great injury to the digestive organs and to the constitutional vigour, if taken in excess ; and this excess is to be calculated not by the actual quantity,

but by the energies of the stomach. Consequently, whenever there is uneasiness after eating, the stomach has been overloaded, whether much or little has been taken. With respect to the difference in the digestibility of food, the experiments of Gmelin and Tiedeman have amply proved, what common observation had taught before, viz. that the most easily divisible is also the most digestible aliment; but that the degree of nutritiveness is generally in an inverse ratio to that of digestibility: the most nutritive food is the least easily assimilated. Again; we do not believe in the opinion of those who interdict either animal or vegetable food under all circumstances of indigestion: either one or other may be perhaps properly prohibited, where either the habit is too inflammatory, or experience has shewn that vegetables disagree; but in general both animal and vegetable food may be taken, as well when the powers of digestion have been impaired, as when they enjoy a perfect state of health. Only we would give this caution, that vegetables be thoroughly cooked, and not brought, as sometimes they are, half raw to table.

In the latter part of this essay, Dr. Philip has stated more definitely his doctrine of indigestion, directly asserting it to be a state of fever. With the qualification he has added, it would be difficult to refute the opinion; but we doubt not that most readers will be aware how very little, in many circumstances, a state of indigestion agrees with fever. The description in the latter part of the following extract is accurately drawn; but whether it be a species of indigestion or not, it is for the most part quite incurable by medicine, and will generally take its own time. Stimulants materially increase the disease, and depletion weakens without relieving.

‘ They will also see clearly that, however it may be modified in particular instances, this disease of the whole system is exactly of the same nature as other affections of the whole system arising from other causes of irritation; that is, that it is a state of fever; a disease which admits of infinite variety, from a degree hardly perceptible, to that which destroys life.

‘ In long-protracted nervous fever, we sometimes find the functions only deviating a little from the healthy state. The patient, when he is still, feels very well; his appetite is moderate, he digests pretty well. The pulse is a little tight, but not more frequent perhaps than natural; the secreting surfaces are less free than usual, but their function is but little deranged. The patient is listless, less capable of exertion, perhaps subject to occasional fits of heat, particularly of the hands and feet, but can hardly be said to be ill, and wonders he does not get quite well. There is no physician who

has not seen those, in protracted cases of the milder forms of nervous fever, in such a state as is here described.'

In the essay on 'the Principles of the Medicinal Treatment in the more Protracted Cases of Indigestion,' we do not find any thing very particularly worthy of remark, or which has not been noticed in the work itself. Dr. P. most judiciously, however, dilates upon the necessity of considering *every* secreting surface in the treatment of indigestion, and not confining the attention to any one singly. The skin is as important an organ in supporting or relieving this complaint as the mucous coat of the stomach and intestines. The medicines which the author prefers for the purpose of correcting these surfaces are the nitrate of potash, tartarised antimony, and ammonia. The following extract from the Appendix points out the circumstances under which the nitrate of potash may be employed:—

'The nitrate of potash is chiefly indicated when there is a tendency to an increase of heat in the evening, or during the night, and particularly to a burning in the hands and feet; and in such cases its good effects are both greatest and most quickly apparent; but they are not confined to such cases. When there is no increase of heat, and even when the temperature is below the healthy standard, if this be not the case in a considerable degree, I still find this medicine to add to the good effects of the alterative course, provided there is an evident tightness of pulse, when examined in the way pointed out in my Treatise on Indigestion: but in such cases it is generally proper to combine it with some warm medicine. Small doses of tincture of orange-peel, or the compound tincture of cardamoms, are those I have generally employed.'

The tartarised antimony acts principally upon the skin, and may be usefully administered when this surface is arid, and there is much tendency to feverish exacerbations. The dose given by Dr. Philip is from one-eighth to the tenth of a grain. Colchicum is said to have an effect very analogous to that of antimony. The circumstances under which ammonia may be exhibited are well understood; nor do we perceive any thing different in the directions of Dr. Philip from those of other authors.

The remarks on *the influence of habitual indigestion on other diseases* are, as might well be anticipated from Dr. Philip's experience and powers of observation, of very high value. The great liability of dyspeptic patients to chronic inflammation, and the little capability such patients have of resisting its effects, must be known to all who observe while they practise. With the ensuing extract we conclude the present article, which we recommend to the attention of

every practitioner of medicine, but particularly to those who regard bleeding and purging as infallible remedies.

‘ They are rarely attacked, for example, with the acute inflammation of the brain and lungs to which the more robust are subject ; but in them, with milder symptoms, these diseases are often equally or more dangerous, which arises from several causes ; the previous debility ; the means of relief being more circumscribed, for habitual dyspeptics, even where they do not appear much debilitated, generally bear loss of blood ill ; the continual irritation of the habitual disease, and the digestive organs generally partaking of that which has supervened. Besides, in proportion as the system is debilitated, its healing powers, on which the success of all our means depends, are impaired.

‘ The frequent obscurity of the symptoms, by which the state of the digestive organs is ascertained in such cases, may also be ranked among the sources of danger ; for in consequence of it, the attention of the practitioner is often confined to the symptoms indicating the inflammation of the brain, or lungs, not without surprise that affections apparently much less severe than those he has been accustomed to see yield to his measures, should here resist them. This naturally induces him to increase their power, which unfortunately generally makes a greater impression on the strength than on the disease.

‘ The best chance of saving the patient under such circumstances, is correcting, as quickly as we can, the increased derangement of the digestive organs, which is supporting the new disease ; and it is of great consequence to effect this by means as little debilitating as possible. The debility previously induced on the nervous system in such cases is always a principal source of the danger ; and it is impossible to restore its vigour while the causes which have impaired it continue. Thus it is, that inflammation of the brain in those who have suffered from long-protracted disorder of the digestive organs, so generally proves fatal ; and that the patient sometimes sinks without the usual forerunners of such a termination.

‘ Both diseases prey on the source of nervous power, which is essential to life in every part of our frame ; and death often suddenly closes the scene, when a common observer can see no cause for the extreme loss of strength which the patient has evidently sustained. There are few cases in this country whose changes are so rapid, and which, after a certain period, become so unmanageable, as the combination we are here considering.’

III.

ON THE DISINFECTING AND MEDICINAL CHLORURETS.

An Essay on the Use of Chlorurets of Oxide of Sodium and of Lime, as powerful Disinfecting Agents, and of the Chloruret of Oxide of Sodium, more especially as a Remedy of considerable Efficacy in the Treatment of Hospital Gangrene; Phagedenic, Syphilitic, and Ill-Conditioned Ulcers; Mortification; and various other Diseases. Dedicated by Permission to the Right Honourable Robert Peel. By THOMAS ALCOCK, Member of the Royal College of Surgeons in London; Member of the Medical and Chirurgical Society, &c. &c. 8vo. Pp. xvi.—152. London, Burgess and Hill. 1827.

It must, we think, be confessed by every unprejudiced person, that of late years the labours of the French chemists have been far more extensive, and more productive of results in the highest degree valuable to society, than the exertions of their English competitors. Their examination of drugs, and the ability with which in many instances they have extracted the active principle from the bulky mass by which it is accompanied, have afforded much greater facility than before existed in administering the most powerful remedies. But if we were to select that discovery which promises the greatest advantages to a civilised people, we should unquestionably fix upon the disinfecting power of certain chlorurets. For not only does this enable anatomists to pursue their offensive avocations without that disgusting odour which so frequently prevents their pursuits, but manufacturers of catgut, curriers, tallow-chandlers, and all those artisans whose works are attended by the evolution of putrid effluvia, may now, at a very trifling expense, prosecute their operations without the slightest inconvenience. In the most crowded city no evil need result, nor even need the existence of such manufactories be known. They who are acquainted with the numerous contentions that have arisen from this source, the deterioration of property by the erection of offensive works, the loss and inconveniences arising to the proprietors of such works, if compelled to remove them, and yet the absolute necessity of enforcing their removal from densely populated towns, will well appreciate the great advantages that may be derived from M. Labarraque's labours.

Mr. Alcock, in the compilation now before us, has very judiciously retained the French terms; and it would be very desirable that this should always be done. From the contrary course having been pursued, it is often extremely difficult to know what preparations are exactly meant.

The preparations which have been employed for decom-

posing putrid effluvia, and thus destroying the offensive odour by which putrefaction is always accompanied, are the chloruret of soda, or oxide of sodium, and the chloruret of lime.

The former, the chloruret of soda, may also be named chloride of soda, which, considering the soda as a compound of oxygen and sodium, or oxide of sodium, are very evidently synonymous terms. The preparation of this article has never been described, so far as we know, in any English chemical work. Mr. Brande, who, we believe, is the latest systematic writer on chemistry, has only mentioned the chloride of sodium, or common salt. The chloride, or chloruret of oxide of sodium, he seems to be unacquainted with.

The chloruret of lime is the preparation formerly called oxymuriate of lime, and since, by Mr. Brande, designated as chloride of calcium, or chloride of lime.

The term chloride is therefore a synonym of chloruret, and both are employed to point out those preparations into which the chlorine enters, without losing its own peculiar properties, and without the formation of an acid.

With regard to the respective value of these two disinfecting agents, it appears from the experiments of M. Labarraque, that the chloruret of lime, and chloruret of oxide of sodium, are both equally efficacious in destroying putrid effluvia at the moment; but the effects of the chloruret of the oxide of sodium are much more permanent than those of the chloruret of lime. The reason of this difference is easily explicable by the difference in the nature of the resulting salts.

In both instances, the chlorurets pass into the state of hydrochlorates, or, in the old nomenclature, into muriates. Now the hydrochlorate of lime is a deliquescent, but the hydrochlorate of soda is an efflorescent, salt. The consequence of this difference is, that the former, though for the moment it destroys the offensive odour, affords, by attracting moisture, one of the conditions necessary for putrefaction; and after a longer or shorter time, the smell is reproduced. The latter, the hydrochlorate of soda, 'acts as a preservative by coagulating the principle which commences putrefaction.'

The following are M. Labarraque's instructions for employing the chloruret of lime, in order to destroy the effluvia of putrid animal bodies; and from these, the proper method of applying them in other circumstances, and where the putrifying masses are far more abundant, may readily be deduced.

'Before approaching a corpse in putrefaction, a tub should be procured in which may be put a load of water (24 litres, about 49 pints); pour into this a flagon (half a kilogramme = 1 lb.

1 oz. 10½ dr. avoirdupois) of the chloruret of lime, and stir the mixture.

‘ Dip a sheet in the water contained in the tub, and unfold it so as to be able to withdraw it with facility, and particularly so as to be enabled to extend it very quickly over the corpse.

‘ To effect this, let two persons open the sheet and place it in the liquid, holding the ends upon the edges of the tub: let this be carried to the side of the body in putrefaction, and at the same instant let the wet sheet be drawn out of the tub and laid over the body.

‘ Soon afterwards the putrid odour ceases.

‘ If blood, or any other fluid proceeding from the dead body, have flowed upon the ground, pour upon this liquid one or two glassfuls of the chlorureted water; stir with a broom, and the putrid odour will disappear.

‘ This operation, however, ought not to be thus performed whenever the liquids spilled upon the ground may become the subject of a chemical analysis: in this case the greatest quantity possible should be carefully collected; and it is when this has been effected, that the disinfection of the ground should be performed in the manner above mentioned.

‘ If the infection have spread in the neighbouring places, in the corridors, stairs, &c., the infected places are to be sprinkled with one or two glasses of liquid chloruret of lime, and the fœtid odour will cease.

‘ Care must be taken to moisten frequently with the liquid contained in the tub the sheet which covers the corpse: the reproduction of the putrid odour will be thus prevented.

‘ As soon as the body has been removed, the sheet which has served for the disinfection should be washed in large quantities of water, dried, and folded.’

To this, we have only to add the testimony of our own experience.

As our principal object in the present article is to extend the knowledge of these preparations, we shall now insert the directions of M. Labarraque for forming them. They are fortunately so simple, that we can scarcely conceive any part of the country where they may not be procured with very little trouble and expense.

‘ When a therapeutic agent comes into general use, it is indispensable to regulate its mode of preparation, that the substance may be identical every where. He desires that these formulæ may produce this effect. The first (the chloruret of oxide of sodium,—*chlorure d'oxide de sodium*) is especially employed in topical and external application to wounds and ulcers affected with hospital gangrene, or of which the character is gangrenous; the other (the chloruret of oxide of calcium,—*chlorure d'oxide de calcium*, or simply expressed, chloruret of lime), serves for the disinfection of

amphitheatres, of sick wards, and of all places become unhealthy by the presence of putrefied animal matters.

' Chloruret of Oxide of Sodium.

' Pure carbonate of soda* - 2½ kilogrammes.
Distilled water - - - 10 kil.

' Mix, and assure yourself that the liquor marks twelve degrees by the areometer (pèse-sel) of Beaumé. If the liquor be too concentrated, which might happen if the salt have effloresced, add the necessary quantity of water to bring it to the degree indicated. If, on the contrary, the solution be too weak, a sufficient quantity of the carbonate of soda must be added.

' If the carbonate of soda constantly retained the same quantity of water, it would only be necessary to fix the precise doses; but this salt is far from being at all times identical.

' The liquor is put into a vessel of sufficient capacity, that about one-fourth may remain empty.

' We dispose upon a sand bath, a glass balloon of four pints, with long neck and wide mouth, into which the following mixture is to be introduced :

' Hydrochlorate of soda (common salt) - 576 grammes.
Peroxide of manganese, in powder† - 448 grammes.

' To the opening of the balloon is luted a large bent tube, and an S tube, for the introduction of the diluted acid. The first tube dips into a vessel containing a small quantity of water, and from this same vessel a large bent tube proceeds to, and dips into the flagon or vessel containing the saline solution.

' The apparatus being conveniently disposed, and the lutes well dried, the diluted acid, cold and mixed some hours previously with the water, is poured through the S tube, in the following proportions :—

' Concentrated sulphuric acid - 576 grammes.
Water - - - - 448 grammes.

' The fire is applied under the sand bath, and is directed gradually, till the disengagement of the chlorine ceases.

' The operation terminated, the apparatus is unluted, and the discolouring or bleaching power of the product is examined.‡ For

* ' The subcarbonate of the London Pharmacopœia.'

† ' The quantity of peroxide of manganese would be too considerable if this substance were always found of the first quality in commerce. Its excess does not in any case seem to be hurtful.'

‡ ' It might save much inconvenience either to have a stop cock at the bottom of the vessel, or to withdraw, by a tube passed through the safety tube, a portion of the solution for the purpose of examination, before the apparatus be unluted. If the tube conveying the chlorine do not pass sufficiently near to the bottom of the alkaline solution, the upper part may be fully impregnated, whilst the lower portion of the liquid may not be of the required strength.

this purpose one part of the chloruret is introduced into the *bertholimeter*,* and a solution of indigo is poured upon it, prepared as follows:—

‘Bengal Indigo powdered - 1 part.
Concentrated sulphuric acid - 6 parts.

Apply heat, and afterwards dilute with 993 parts of distilled water.

‘The chloruret ought to discharge eighteen parts of sulphate of indigo. It is essential to make two or three proofs of discoloration.

‘After the first, which is made by feeling one’s way, the second ought to be made briskly, by adding at once the whole quantity of the solution of sulphate of indigo, which the preceding proof had required to arrive at a deep green. In acting promptly the discoloration is more decided (as observed by MM. Gay-Lussac and Welter); which obliges us to make a third proof, after having added some parts of the sulphate of indigo to the second, to arrive at the green colour, and in keeping account of this addition in the last experiment, which is the most conclusive.

‘If the solution of carbonate of soda be not sufficiently saturated with chlorine, a current of this gas should be again passed through it, to bring it to the fixed point.

‘M. Labarraque adds, that he has here entered into superfluous details for the instructed apothecary; but although minute for practised chemists, these details have appeared to M. L. indispensable in the preparation of a medicament which till very lately had not been employed in medicine. He recommends that the preceding process should be followed to the letter, so as to obtain always an identical product, and thereby the same beneficial results; for it is known that in the preparation of certain medicaments, the mode of preparing them modifies their external characters, and even their virtues.†

‘*Chloruret of Oxide of Calcium.*—(*Chloruret of Lime.*)—

This remark has been verified by Mr. Morson, who has paid considerable attention to the preparation of this chloruret: his apparatus is furnished with stopcocks, by which a portion of the preparation may be withdrawn for examination at any period during the process.—Ed.’

* ‘A simple graduated tube or measure will answer the purpose.—Ed.’

† ‘Mr. L. further adds, “I hope to be pardoned for this solicitude, when it is with this product as it is with all the produce of the hands of men, nothing is perfect. Very clever chemists, thinking perhaps that advantageous modifications might be made in this process, have made chlorurets which have not produced the same effects as those which I had caused to be tried. Nevertheless, I have not made any mystery respecting it, I have described the process with all the care of which I am capable; but it is impossible that this description should supply the habit of making it on a large scale, and of often performing the same operation.”—The author deems it simply an act of justice to M. Labarraque to state, that he has found the chlorurets, obtained from M. L. at different times, very uniform in strength, and possessing the same medicinal properties.’

The process by which M. Labarraque makes this preparation is as follows:

‘Caustic lime is sprinkled with a small quantity of water, and allowed to slake completely. This damp powder is mixed with one twentieth part of hydro-chlorate of soda, and put into vessels of earthen ware of an elongated form, into which the chlorine arrives. This gas is disengaged from a mixture similar to that employed to prepare the chloruret of oxide of sodium. Several apparatus are placed by the side of each other, according to need, always being careful that the chlorine arrives slowly into each of them, so that the combination may be made successively. This condition is essential to the success of the operation.

‘The hydrated lime, being sufficiently charged with chlorine, becomes moist, and on this phenomenon we are aware that the operation draws near to a close.

‘To assay its point of saturation, one part of this chloruret is diffused in one hundred and thirty parts of water, and this solution ought to destroy the colour of four parts and a half of sulphate of indigo.

‘Mr. L. observes, the chlorometer of the celebrated Gay-Lussac (described in another part of this work) is much more exact; and it is of this instrument we ought to avail ourselves to examine this chloruret, if we wish to employ it for degenerated burns, as M. Lisfranc has done with success.

‘For disinfections, the essential point is to saturate the mixture with chlorine, and the purity of the bases is less necessary for chloruret for this purpose than for that which is employed upon living beings.

‘In considerable establishments, such as hospitals, &c. where daily disinfections may be required, we may make liquid chloruret of lime, and the following is the process:—

‘Put into forty litres of water half a kilogramme of hydro-chlorate of soda, and one and a half kilogramme of slaked quick lime; a tube must be conducted to within a few inches of the bottom of this liquid, (which must be stirred with a wooden spatula), to conduct the chlorine disengaged from a mixture which may be one half less considerable than that which has been indicated to obtain the chloruret of oxide of sodium: the discolouring property of this liquid chloruret must be tested; it will be too strong for the disinfection of the wards and of putrid animal substances; it must be diluted with a sufficient quantity of water, and may be used for sprinklings.’

Having thus presented to our readers, at some length, an account of the nature and mode of applying these preparations for the purpose of destroying putrid effluvia, it remains that we should notice them as therapeutic agents. This, however, may be done very briefly; for the principle must be the same, or nearly the same, in every case.

The diseases enumerated by Mr. Alcock, as those in which the chlorurets have been beneficial, are such as are either

liable in their progress to be attended by putrefaction, or by some peculiarly offensive odour, which perhaps reacts by aggravating the disease from which itself originated. Accordingly, in compound fractures, and all accidents to which an offensive, and sometimes even putrid, discharge may succeed, these preparations may be applicable. It is scarcely necessary, however, we apprehend, to inform our readers, as Mr. Alcock has done, that sprinkling a broken leg with solution of chloruret of soda will not set the limb.

The object at all times is in the first instance to destroy an offensive odour; but in some cases it seems to have been used as a simple stimulant.

As usual with every new discovery, the French appear completely to have exhausted the subject. Almost every disease in which there is any odour, has been submitted to the influence of the chlorurets, and unquestionably in very many instances beneficial effects have ensued. We shall do little more in the present paper than enumerate the affections in which it has been tried. These are hospital gangrene, phagedenic, syphilitic, and other ulcers, in compound fracture when unhealthy suppuration and offensive effluvia are present; diseases of the bladder and urinary organs; diseases of the uterus, burns, scalds, cancer, ozæna, herpes, ulcerations with caries, pyalism, and ulcers of the mouth, putrid sore throat, &c. &c.

The mode of employing the chloruret of oxide of sodium must be much governed by the nature of the parts. In general, it may be safely used when diluted with eight or ten times its weight of water; but this may readily be ascertained after the first trial. If it is unattended by pain, the solution may be much stronger; and in some rare instances it may even be employed pure.

When injected into the vagina, it should be much diluted; sometimes even with thirty times its weight of water, and the solution may be rendered stronger, according as the patient becomes able to bear it. Mr. Alcock has quoted several instances of its utility in diseased uterus, but appears to us somewhat too sanguine in his opinion respecting it. That by destroying the offensive effluvia of the discharge, however, it very greatly contributes to the comfort of the patient in diseased uterus, we are fully convinced by experience; nor, after the effects we have seen, do we think medical men will be justified in neglecting its use in these cases.

To those who wish for more ample details, we refer to the volume before us, which appears to contain every thing that has any where been written upon the disinfecting chlorurets.

Having now done with the subject of Mr. Alcock's book, we have some remarks to make upon the manner in which it has been *got up*; and if, in doing so, we appear to bear somewhat harshly upon the author, we can assure him and our readers, that we have no other object than to support the respectability of the profession of which we all are members. If, indeed, Mr. A. is really desirous of attaining the same end, he will rather thank us than feel angry for pointing out the manner in which he has degraded it. He will hasten to excuse himself on the plea of ignorance, and to prove the truth of his plea by correcting his error. If, on the other hand, his plan has been systematically arranged, and he should still persevere in it, he may find us, upon some future occasion, more severe censors of his delinquencies, than we are willing to be upon the present occasion.

When, in our last Number, we mentioned our intention of denouncing every practice by which reputation and emolument are attempted to be surreptitiously obtained, we did not anticipate that we should so soon have been called upon to redeem our pledge. We are prepared to meet the call.

The general character of the volume is that of quackery; it is an attempt to foist the compiler's name into public notice, from the title-page itself to the innermost recesses of his anatomical studies: and at the same time, subjects altogether irrelevant to the use of the chlorurets are introduced, because they enable him to describe *his own method* of preserving anatomical subjects (a method, by the by, for which the anatomist is not in the slightest degree indebted to Mr. A.), and to announce that 'Mr. J. R. Alcock—whose models in wax, representing dissected parts of surgical anatomy, were rewarded by the Society of Arts by their large gold medal—was enabled to preserve portions of subjects in his private study at a period when a succession of parts could not have been obtained.'

But, without going further, we ask Mr. Alcock for what purpose his title-page states, that his volume is 'dedicated by permission to the Right Honourable Robert Peel?'—We can imagine none in the slightest degree creditable to himself. Mr. Peel is no physician, no naturalist, no professor of science, able to judge of the value of the facts which the work contains; nor, if he were, with his numerous avocations, could he find time to investigate and decide upon their worth. That he is one of our profoundest statesmen, our most elegant scholars, our most benevolent legislators, will give him authority, and that the highest, on any of those subjects with which such characters are conversant; but none whatever upon medical opinions or chemical doctrines.

We leave Mr. A. to answer this matter if he can. Mr. Peel's name may certainly bestow a consequence upon him, which he could by no other means obtain.

Every succeeding day makes us more deeply sensible of the little moral feeling that prevails in the medical profession,—every succeeding day brings additional facts to our notice, by which its character is degraded. Ingenuity itself is tortured, rather than the professors of medicine will tread in an honourable path, or participate in those feelings and conduct by which the truly moral and religious man is characterised. Claiming for themselves a rank above trade, they descend far below the honest tradesman in mean and ignoble artifice,—they place themselves on an equality with the fraudulent bankrupt or the practised swindler. It is no time to use measured terms, the evil must be staid at once, if we would have medical men retain their station in the commonwealth. There is no security where there is no honesty.

But how, it is asked, is such a state to be remedied? We will answer the question. It never can be remedied by legislative enactments: these may repress crime; but there are many vices which human laws can never reach. If, indeed, we would remedy this lamentable want of principle, if we would make medical men feel that they are moral agents, we must make them sensible that they are also responsible agents, responsible to that great Being by whom they were created, and by whose almighty power they are still sustained. They must learn to look from the present time to eternity, and to bear ever before them, that no success here can compensate for eternal misery hereafter: and if these principles be thoroughly taught, no question can exist, but that the profession would not only be more virtuous, but in every respect far more efficient. Our duty to the Creator can never be performed without the full performance of our duty to our neighbour: and when on every occasion we consider ourselves as answerable in another life for every action in this, when our ignorance is presented to us not as a misfortune, but, if at any time it has been in our power to correct it, as a fault,—what medical man will dare to step beyond his knowledge, or to neglect any opportunity of improvement which his circumstances may afford? Men will then practise medicine not merely as a means of sustenance or a source of gain, but as involving duties which can with no safety be neglected. They will be the able dispensers of health, or the benevolent consolers of disease; they will deem nothing beneath them but dishonest artifice and vicious attempts at gain. Nor will they give a wide

limit to their notions of honest and honourable; but will constantly seek, not how far they may go without danger to good morals, but how closely they can adhere in their conduct to the great pattern of sinless excellency, and almost super-human perfection. They will in fact be religious, and because religious, necessarily virtuous men.

Such would be the consequence of extending correct principles through the medical profession; and we solemnly call upon those to whom is intrusted the guidance of medical students, to perform their part of the work. Awful indeed is the responsibility they have undertaken; and, however for the present they may amuse themselves or their uninformed hearers by sarcasms against the great truths of religion, let them be assured that no long time will elapse before all the delight of popular applause will pass away: they will look back with pleasure only upon that part of their labours by which they have sought to make men better and wiser; but with bitter regret upon all their other works—if, indeed, time is left them for regret—a moment *may hurry them off*, even while engaged in their iniquitous exertions.

IV.

ON THE IMPROVEMENT OF MEDICAL EDUCATION.

Observations on the System of Teaching Clinical Medicine in the University of Edinburgh; with Suggestions for its Improvement; humbly submitted to the consideration of the Patrons and Professors of that Institution. By JAMES CLARK, M.D. 8vo. Pp. viii. 30. London, 1827.

Hints respecting the Improvement of the Literary and Scientific Education of Candidates for the Degree of Doctor of Medicine in the University of Edinburgh; humbly submitted to the consideration of the Patrons and Professors of that Institution. By a GRADUATE of King's College, Aberdeen. 8vo. Pp. 21. Edinburgh, 1824.

Observations on the Preparatory Education of Candidates for the Degree of Doctor of Medicine in the Scottish Universities; humbly submitted to the consideration of His Majesty's Commissioners for Visiting the Universities and Colleges of Scotland. By JOHN THOMSON, M.D., late Professor of Military Surgery in the University of Edinburgh. 8vo. Pp. 19. 1826.

Thoughts on Medical Education, and a Plan for its Improvement; addressed to the Council of the University of London. By ANTHONY TODD THOMSON, M.D., F.L.S., &c. &c. &c. 8vo. Pp. 51. London, 1826.

Thoughts on the Advancement of Academical Education in England. 8vo. Pp. 184. London, 1826.

THE publications of which the titles are placed at the head of this article, are, with one exception, directed exclusively

to the improvement of medical education : and the work which forms an exception, inasmuch as it takes in the whole subject of academical education in this country, is yet added to them without any impropriety, because among the alterations suggested or contemplated by the author, those connected with the education of young men intended for the medical profession in this country form no unimportant part.

The remarks contained in these several works chiefly refer to two points connected with the medical schools of Great Britain; namely, the adoption of certain plans from some of the continental schools of medicine, and an increased attention to the education of students destined to the profession of physic, before their more strictly professional studies are commenced. The one relates to the rank which the British medical school is to hold in Europe; the other to the rank which medical men are to take or to preserve in society, in times when all classes may be said to be particularly impressed with an idea of the value of every kind of mental acquisition. Physicians, surgeons, medical practitioners of all descriptions, have a deep interest in both these questions.

When the latest alterations were made in the statutes of the University of Edinburgh, relating to the degree of M.D., we took the liberty to speak in plain terms of some of the faults of that Institution, and of the Hospital which is attached to it; not with angry feelings, certainly, but with a strong recollection of the disadvantages which we had had sufficient opportunities of becoming acquainted with. At the same time, we spoke in language of just praise of other parts of the same great school, and particularly of the clinical wards of medicine. Whatever may be the general policy of medical editors, we have never thought it incumbent upon us to pass over in silence the most important matters relating to the constitution of our profession; or, we hope, wanted the courage either to blame or to praise. With respect to Edinburgh, we can never speak of the interests of its medical school with indifference, or cease to remember with gratitude how much we owe to the liberal institutions attached to it. But we do not consider ourselves bound for ever to suppress the expression of our just concern, when we think we see the foundations of that noble school weakened by the ill-judged appointment of inadequate persons to chairs which we have seen filled by men of superior intellect; nor are we so miserably prejudiced in favour of the place of our professional education, as not to acknowledge that some of the arrangements of that school were of a nature to preclude the possibility of any student becoming well acquainted with *every* part of his profession by studying at Edinburgh *alone*.

Dr. Clark's observations are the result of the peculiar opportunities which his long residence on the continent has given him of comparing the medical schools of his own with those of other countries, and are made in a very liberal and enlightened spirit. He has especially directed his attention to the method adopted in various universities of teaching *clinical medicine*. To the clinical plan of teaching, the Edinburgh medical school has unquestionably owed no small portion of its just celebrity; and it is a matter of surprise, that hardly any attempt should have been made to adopt this method of communicating medical knowledge in London. From the patients of a large hospital, the clinical professor selects such as he considers to be the most useful for the purpose of illustrating the practical application of the principles of physic. His pupils attend him in his daily visit to these patients, at which he asks several questions of each, and prescribes for each, so as to be heard by all the pupils attending him. Twice a week he delivers a clinical lecture, in which he either takes a retrospect of cases which have terminated, whether successfully or unsuccessfully, explaining his views and his treatment; or offers his conjectures concerning cases just admitted into the wards, and declares the line of practice which he means to pursue. We owe it to the eminent physicians who successively discharged the duties of clinical professor during our residence at Edinburgh, to state, that nothing could exceed the industry and care with which those parts of it were performed which belonged to the hospital, or the candour and judgment which for the most part pervaded their highly instructive clinical lectures. None but the most irregular attendants at the hospital, or the most inattentive of the hearers of the clinical lectures, or the most obstinately attached to their own opinions, could, we think, fail to experience, at the close of each course of those lectures, that they had increased or corrected their previous practical knowledge.

It is not to be supposed that Dr. Clark, himself an Edinburgh physician, denies the existence of these advantages of the present mode of teaching clinical medicine there; but he exercises the right, or rather performs what may be said to be the duty, of every one of the former scholars of that university, of pointing out certain particulars, in which, on a comparison with the customs of other schools, that in which he was educated appears to be defective. Nor is this gentleman open to any charge of inconsistency, arising out of his former defence of the clinical system of instruction pursued at Edinburgh, against the incorrect statements of Tommasini. The Bologna professor paid a short visit to Edinburgh, about seven years since; but being wholly ignorant of the English

language, was not able to acquire much exact information concerning the medical school of that city: he even appears, although he visited the clinical wards once or twice with Dr. Duncan, to have left Edinburgh without knowing that there were such things as clinical lectures delivered there; and on his return, he hastened to gratify his countrymen, by a complacent setting forth of the superior advantages of the Italian clinical school. This mistake, and others even more gross, connected with the state of English medical literature, Dr. Clark took the trouble to correct in two letters addressed to Tommasini, published at Rome, in 1822 and 1823, and written in the Italian language, with equal modesty and eloquence. But, whilst ably defending the clinical school of Edinburgh from unjust accusations, Dr. Clark by no means held it up as a model of perfection, but admitted, that in some respects, the continental, and even the Italian system, might be preferable to it. Since that period, Dr. Clark seems to have paid particular attention to this question; and on his return to England, hearing of the existence of the royal commission engaged in the important task of inquiring into the state of education in the Scottish universities, he has hastened to place his opinions before the patrons and professors of that of Edinburgh. He begins by describing the mode in which clinical medicine is taught in some of the most esteemed schools of the continent:—

‘ There are two methods of teaching clinical medicine adopted in the medical schools of the continent, and two different kinds of clinical institutions. One of these may be called the *hospital clinic*; * and the other, which is chiefly in use in Germany, is called there the *poly-clinic*, or *ambulatory clinic*.

‘ In both these institutions the system differs in some very material points from that in use at Edinburgh. The chief of these consist—1st, in the more advanced pupils having a part in the treatment of the patients;—2dly, in the greater length of time during which the pupils are required to attend the clinical course; and, 3dly, in the manner of appointing the clinical professors.

‘ In the hospital clinic, the elder pupils are appointed to attend to certain patients, of whom they may be said to have the charge, under the immediate inspection of the professor. They draw up the history of the cases under their care, and are examined on the nature of the disease by the professor, in the presence of the other pupils. They are also required to point out the symptoms which *more* especially characterise the disease, and serve to distinguish it from others which it most nearly resembles, and with which it might be confounded; and, finally, to give the prognosis and

* ‘ I venture to adopt *clinic* as an English word, rather than to be constantly using the French term *clinique*.’

method of treatment.* Those pupils continue to attend the same patients; and at every succeeding visit they examine, under the eye of the professor, the state of the symptoms, inquire into the effects of the remedies prescribed, &c. Of the whole case they keep a faithful record. If the disease should prove fatal, the attending pupil is further required to state, previously to the examination of the body, (a thing which is never omitted), the morbid conditions which he expects to find, and what he considers to have been the cause of death.

* There can be no doubt that such a method of exercising the more advanced clinical pupils is most advantageous to them; and when illustrated by such clinical lectures as are given at Edinburgh, proves still more beneficial to the pupil. But though such a plan of teaching would doubtless prove equally advantageous to the pupil in this country as in Germany, France, and Italy, its introduction into the Edinburgh school would, I believe, be attended with considerable difficulties; though its great advantages have been fully admitted in a paper written, I have reason to believe, by one of the most distinguished professors of the university.†

† The *poly-clinic*‡ is in very general operation in Germany; and at some of the universities of that country it is almost the only one on which they depend for instructing the pupils in practical medicine, as at Goettingen and Halle. At Berlin and Bonn, it also forms an important part of the system of clinical instruction; and one of the most acute and intelligent professors that I met in Germany, told me that if he had a single ward with eight or ten patients, in addition to his poly-clinic, he would desire nothing further for the practical instruction of his pupils.

‡ The poly-clinic of the German schools resembles closely our general dispensaries. As in them, the patients with chronic diseases, who are able to come abroad, are examined and prescribed for at the clinical rooms, and those labouring under acute diseases are seen and treated at their own houses.

§ The pupil is first exercised in examining the patients that come to the clinic, under the observation of the professor, and is required to state the nature of the disease, its treatment, &c., as in the hospital clinic. The treatment being agreed upon, the pupil writes the prescription, which is examined, modified if necessary, and signed by the professor. After a time, the pupil is intrusted with the care of the out-patients. He is required to draw up an accurate history of each disease under his care, which is submitted to the inspection of the professor, as are also the reports of the progress and treatment of the case. Moreover, when he finds

* At the university of Bonn, Professor Nasse divides the clinical pupils into two classes. The younger, or pathological class, are exercised on the pathology and diagnosis of the diseases only;—the second, or therapeutical class, are required to state the treatment, &c.

† Ed. Med. and Surg. Journal, vol. xviii. p. 614.

‡ So called from the much greater number of patients seen at this than at the hospital clinic.

himself in difficulty, or the case appears to the professor to require it, the clinical assistant accompanies him to see the patient, and assists him with his advice. In urgent cases, I believe, the professor also visits the patient; and where the disease proves fatal, he superintends the examination of the body,—a practice to which, on the continent, objections are very rarely made.

Each pupil writes and retains the cases of his own patients, but the whole are copied into journals, kept at the clinical rooms for the purpose. These form very useful records; and, indeed, afford the best materials for ascertaining many important points in statistical and topographical medicine: such as the nature and occurrence of diseases in different periods or seasons, and in different quarters of the town; their relative prevalence among the various classes of inhabitants, and the means of tracing the origin and progress of epidemics.

The above extract is sufficient perhaps to shew, that in some respects the foreign schools are better regulated than our own; and from a comparison of these, and other circumstances, Dr. Clark is induced to make some distinct objections to the Edinburgh system, which we could not give more briefly than in his own words: we shall, however, comprehend some of his observations upon them in our quotation.

‘ To sum up my objections under one view: The system of teaching clinical medicine in the university of Edinburgh appears to me defective for the following reasons:—

‘ 1. Because the period of attendance required of the candidate for a medical degree is not sufficiently long to admit of his acquiring such a share of practical knowledge as every graduate ought to possess.

‘ 2. Because one or even two professors are not sufficient to teach clinical medicine efficiently to the number of medical pupils at present frequenting the university of Edinburgh.

‘ 3. Because the professor has too many patients to examine and prescribe for, during the time allotted to the clinical visit,—which ought to have for its object the instruction of the pupil, as well as the treatment of the sick.

‘ 4. Because the clinical lectures are too few.

‘ 5. Because the pupils have little or no opportunity of acquiring any practical experience under the direction of the professor.

‘ 6. Because the clinical professor retains the charge of the clinical wards for too short a period at one time, and resumes it at too distant intervals.

‘ These defects, I humbly conceive, may be remedied as follows: 1st, By increasing the period during which the candidate for a medical degree shall be required to attend to clinical medicine, (as without sufficient time he cannot possibly acquire a knowledge of practical medicine, however fair the opportunities held out to him

may be); 2dly, By increasing the number of clinical professors in office at the same time; 3dly, By diminishing the number of patients under the charge of each professor; 4thly, By increasing the number of clinical lectures; 5thly, By making the office of clinical professor permanent, or fixed at least for a series of years, in the same individuals; and, lastly, by instituting a practical clinic upon the principle of the poly-clinics of Germany.

‘To render the clinical school of Edinburgh complete, it appears to me that a practical should be added to the present hospital clinic, and two professors appointed to conduct each. The number of patients in each of the hospital clinics should, I think, be from fifteen to twenty only, as that number would be sufficient to occupy the physician during the period appropriated at Edinburgh to the clinical visit, (which I believe to be restricted to one hour), and would be quite as many as the pupils could attend to with advantage.* By restricting the patients to the number I have stated, the physician would, moreover, have time, not only to examine them more thoroughly, but also to make such practical remarks to the pupils in the wards, as the immediate symptoms of the cases required. These remarks should form, in my opinion, an essential part of a clinical visit: they would be most beneficial to the pupil, and need be productive of no disadvantage to the patient,—as every judicious physician would be careful to avoid making any remarks that could produce an injurious effect upon the minds of the sick. In the clinical lectures, the cases would be more fully commented on. The number of these lectures should depend, perhaps, on the state of the patients in the clinical wards; but under no circumstances should there be fewer than three each week.

‘The practical clinic, in the present state of the medical school of Edinburgh, would, I believe, also afford full occupation for two clinical professors. This clinic might, I imagine, be readily supplied, by medical out-patients being encouraged to attend at the Royal Infirmary, and by rooms being appropriated for the purpose of visiting them: or, on failure of this, a respectable dispensary might be advantageously converted to this use.† The professors would require one or more assistants; and it is to be presumed that there would be no want of proper candidates for this office among the younger physicians. It would also be well if the professors directing this clinic, had each a small ward at their disposal, into which they

* ‘I cannot at this moment refer to my notes on the foreign clinics; but, as far as my memory serves me, sixteen is about the average number in the medical clinics;—frequently not so great a number as this.’

† ‘If a practical hospital clinic should be preferred to the poly-clinic, I can see no objections to it, provided it is made an efficient one; but the latter appears to me altogether more applicable to the Edinburgh school. Both would be better still. The hospital clinic, during the summer session, might be made a practical one, and restricted to the more advanced pupils. Whichever plan is adopted, a practical clinical institution I hold absolutely necessary to a good medical education.’

might transfer, for a time, such of the cases as required more minute investigation than the circumstances of out-patients admitted. And this would enable them also to illustrate, more effectually, the nature and treatment of the most important diseases, or of those which might be epidemic at the time.

‘Such is a general view of a system of clinical instruction, well adapted, I humbly conceive, to the medical school of Edinburgh, and to the state of feeling among that class of the community in this country, which supplies the objects of medical attendance to our hospitals and dispensaries. The incalculable advantage which it holds out to the pupil over that now in use, is too evident, I think, to require that I should farther occupy your time with it. Difficulties would, no doubt, at first present themselves to the introduction of such a system; but I cannot foresee any valid objections beyond those which occur to every innovation (however evident its merits may be) on long-established systems. The present clinical professors may indeed object to it, as much too laborious a duty, in addition to the duties of the other professorships which they hold in the university; and the objection would be a most reasonable one on their part. But I can see no good reason why so laborious and important a duty as that of teaching practical medicine should be necessarily superadded to that of the other medical chairs in the university; more especially to those which have only a distant connexion with clinical medicine, and certainly do not require practical physicians to fill them. When the medical professors of the university, especially those holding chairs nearly connected with the subject of practical medicine, have the time and inclination to take a part in the charge of the clinical course, as an equally regular and fixed duty with that of their other professorships, they should be preferred. But it is surely to such chairs only that the duties of teaching clinical medicine should be attached, if they are attached to any. Professors might be appointed to the chair of clinical medicine who held no other, as is the case in the medical school of Paris. But whatever plan is adopted, there can be no doubt, that in order to teach clinical medicine properly, the office of clinical professor should be as fixed and regular as that of any other in the university. The most important branch of instruction in the whole medical curriculum, as far as regards the pupil, and the most difficult as respects the professor, should not surely be considered a secondary duty, nor attached to that of the other medical chairs in the university, the professors of which may or may not be qualified to teach practical medicine, and who may take upon them the duties of clinical professor or not, just as suits them.’

Most of these suggestions appear to be judicious: the principle of all of them is, we think, incontestable, although we certainly differ from Dr. Clark respecting some of his objections to the present Edinburgh system. We fully agree with him, that the time expected to be given by the student to clinical hospital practice is too small, is not in fact suffi-

cient to qualify him, as it ought undoubtedly to do, for beginning to treat diseases without assistance. Dr. Clark's remedy for this is to require that the student should attend not *one* but *three* courses of clinical instruction; the first being devoted to clinical surgery, the second to clinical medicine, and the third to what he denominates the practical clinic. In truth, supposing four years to be spent at Edinburgh, and the attendance at the hospital to begin with the second, the system of clinical instruction should commence at once. If students pay to be admitted to an hospital, it is not surely for the melancholy privilege of walking about the wards, gazing at they know not what, waiting with impatience for a physician or surgeon whom they are to pursue through the various wards, vainly hoping for some words of wisdom which so great a person never condescends to throw to them. Yet such is the common practice of that hospital, and of many others; and a course of exercise like this has very justly been expressed by the term '*walking the hospitals.*' If, instead of this, a larger portion of each hospital was devoted to clinical purposes, and the plan of Dr. Clark adopted, there can be no question that very great advantages would accrue to all medical students, and that the first steps of young practitioners would be much steadier and more satisfactory than they are. Supposing two winters, or two periods of six months, to have been spent in clinical hospital attendance, under able, careful, and judicious preceptors, the third course or winter might be most profitably devoted to the practical clinic, or to a dispensary, of which the physicians and surgeons should give clinical lectures. It is, we believe, very common for the Edinburgh students, in the last year of their academical study, to become pupils at the dispensaries of that city; and we can ourselves bear testimony to the excellence of those establishments, in which each pupil has a certain number of patients allotted to him, who are living in their own habitations, and whom the pupils visit, subject to the occasional superintendence of one of the physicians and surgeons, whose assistance they are also always able to have when they require it. In this manner, the student may make his first essays in practice with safety to his patients and himself, with more confidence than he could do, we think, in what Dr. Clark terms the hospital clinic, and with less fear of his being depressed, if of a modest character, by the apprehension of public failure; or misled for ever, if more sanguine, by some accidental success, to which publicity would give a sort of triumph. For a somewhat similar reason to that just expressed, we cannot say that we admire that part of the system of foreign clinical schools which consists of giving

the more advanced students cases in the hospital, concerning which they are to undergo a kind of public examination daily. We question much if real practical knowledge is to be gained in this way, and rather imagine it must be the result of a mental process less formal, and conducted with more silence, and more deliberation, and more tranquillity of mind. All students, and all young practitioners, must be open to occasional error when they first attempt to apply even the knowledge of a well-stored mind to daily practice. Every candid medical man, supposing him ever to have examined his own proceedings, must have felt this, and have corrected and improved himself by many successive exertions of attention; and there is some reason to apprehend, that this correction is more willingly and more surely submitted to when we act without witnesses, than it would be in a crowd, where vanity would come to the support of error, and perhaps perpetuate it in the student's mind. If all young students were called on to act in the clinical wards, we should have, on the one hand, many whose timidity would make their practice ineffectual; and, on the other, not a few who would be in all cases rashly and dangerously bold.

We agree with Dr. Clark, that the number of pupils and of patients attached to each clinical professor, is, or was, too great; and that the clinical lectures are too few. Many difficulties are to be overcome, before all these objections can be removed. In our own opinion, the clinical lectures might be rendered much more simple, much more useful, much more *clinical*, if they were delivered every day. Supposing, for instance, we say that the clinical professor should give an hour and a half every day to his duties. The first hour, if the lectures were given daily, would be quite sufficient for a lecture on the subject of the preceding day's visit: the time which had intervened would be sufficient, not only for the little preparation which the lecturer might require, but also for the student to have exercised his own reflection in; and thus in each lecture the ideas of the student respecting phenomena recently seen by him, would be corrected or confirmed; and he would also have the opportunity, by again seeing the patients immediately after the lecture, to compare one day's experience with another. We should also, from our own experience of the life of a clinical student, very greatly approve of some arrangement by which the pupils might be enabled to pay the patients an evening visit. This, we think, might be done under the superintendence of the physician's assistant, or clinical clerk, who would of course always be one of the most distinguished, and generally one of the oldest, of his pupils. It would not invariably be necessary

to make a formal investigation into every patient's condition at this visit; but the symptoms which so often come on, or are aggravated, in many disorders, at this period of the day, are important in themselves; and it is important that the future practitioner should be familiarly acquainted with them. A brief report of this visit might be made to the professor previous to the next morning's lecture. Nor, whilst speaking of clinical lectures, should it be forgotten, that much valuable information may easily be conveyed to the student, by brief occasional observations made at the bed-side, without such observations being at all of a nature to agitate or alarm the patients. Clinical remarks of this kind, which are not open to the just objection we feel in this country to a formal lecture by the bedside of a dying or suffering patient, are of incalculable use to the pupils; and where they are frequently and judiciously made, as is the custom with some of our hospital physicians and surgeons in London, they almost supply the place of a more ample clinical lecture. The clinical lectures in Edinburgh were often too long, and too little clinical; for the student does not attend the clinical teacher to learn the history of diseases, but to learn how to distinguish and how to cure them.

Dr. Clark's sixth objection is founded on a circumstance which we have been accustomed to regard as beneficial in its operation. We mean the frequent change of clinical lecturers. Supposing each of them to be properly qualified for so important a task, this variety of teachers affords the student an opportunity of comparing the results of one kind of practice with those of another kind; he sees by what various means the same terminations of disease may be effected; he observes in what particulars practice may be uselessly or advantageously modified by individual opinions, and learns to be less obstinate and controversial in many matters relating to practice.

Believing that Dr. Clark's opinions have been presented to the patrons and professors of the Edinburgh University with the sole desire of calling their attention to such improvements as the altered state of society, and the progress of knowledge, nay, even the mere progress of time, may have rendered necessary, in order that that celebrated school of physic may preserve its station among those now rising up in this kingdom, and in other countries,—we have also presumed to offer our remarks with equal openness, and in the same spirit of attachment, but not of blind attachment, to a school where we passed many happy and industrious, and, as we hope, useful days. And there is one test, to which we

are sure Dr. Clark will excuse us, if we particularly request his attention, whenever the comparison of domestic with foreign schools of medicine occupies his thoughts. It is not with any vulgar prejudice against what is foreign, that we venture to express our opinion, that if we look to the judgment by which practical medicine has been exercised in this country during the last fifty years, if we regard the unostentatious character of our national medical philosophy, and the wisdom by which the medical public have during that period been prevented from following in implicitness and folly any exclusive theory,—we shall see some reason to think that the system must have many valuable parts which has wrought such salutary effects. If we turn to France, to Italy, to Germany, where systems of education far more elaborate and imposing are to be met with, what do we find?—Broussaïans, Pinellians, Brunonians, Tommasinians, animal magnetisers, fierce sectarians of every description, minute pathologists, inert or routine practitioners, and talkers without measure, or mercy, or end. Of the many valuable qualities which are made subservient to these purposes, the industry, the patient research, the careful classification, the devotion of life, we are well aware; but the object of physic, at least of clinical physic, is to produce wise and safe practitioners, men who follow no master blindly, and despise no form of instruction, who know when to be bold and when to be cautious, when to wait upon Nature, and when without fear firmly to restrain her movements.—To conclude our notice of Dr. Clark's pamphlet, we have only to say, that, if the most disinterested motives, the greatest moderation of sentiment and expression, and the most liberal views of all that relates to medical education, can secure the attention of the patrons and professors of the Edinburgh University to what at first sight appears to be a remonstrance,—his excellent Letter to them will not be disregarded, or unproductive of good.

The 'Hints,' addressed to them by a Graduate of Aberdeen, are written by Dr. John Thomson, of Edinburgh; also the author of the *Observations on the Preparatory Education of Candidates for a Degree in Medicine*, and both relate to a subject which cannot be neglected by the university of Edinburgh, without considerable danger of the degree conferred by them falling lower than we wish to see it in the estimation of the public. Although the foundation of any physician's prosperity ought to be, and must be, a complete acquaintance with his profession,—the public, we are to remember, much more commonly form an incorrect judgment concerning his professional qualifications than concerning his literary and scientific attainments. Without a

considerable portion of these, no physician can rise to enviable eminence, or be confided in by the higher and middle classes; illustrations of which opinion might easily be given. It is the duty of those who confer titles and degrees of consideration, to take care that those obtaining them should receive such an education as may enable them to preserve the respectable rank in which they are placed; and it is evidently their interest to preserve the respectability of a title, if they wish it to continue to be sought for with any degree of eagerness. The first object of the professors in any medical school, should be to enable those resorting to it to obtain a complete medical education; but perhaps no student is really enabled to make himself completely master of his profession without the advantage of a previous education, very carefully conducted, and during the course of which his attention has been directed to ancient and modern literature, and to many branches of science. Supposing, therefore, that the division of duties among the medical professors of Edinburgh was less defective than it is, and that the amendments suggested in the 'Hints' had been attended to, instead of disregarded, as it seems they have been; much more would be required, as much more is required, by every Edinburgh graduate, before he can take his place with satisfaction, or a parity of advantage, with the graduates of the English Universities. Nothing can be more evident, than that a medical school is yet wanted, in which all the advantages of the older ones may be combined: and looking forward to the probability of this being effected, these remarks of Dr. J. Thomson are not yet deprived of their original interest.

'It is to be presumed, that besides providing for the better preliminary education of students of medicine attending the University of Edinburgh, the new *Curriculum* will contain such alterations in the course of the medical studies to be followed, and recommend the institution of such additional professorships as the present extended state of medical science may require. It is of great importance to the public, that you should inquire, whether a division of duties among the members of the medical faculty, made a century ago, is at all adapted to the wants and to the condition of the times in which we live; or calculated to comprehend, and to exhibit to students, a view, sufficiently complete, of all the discoveries and improvements which have been made in the theory or in the practice of physic, and in those collateral branches of science, upon the progress of which the advancement of medicine mainly depends?

'The chief of these collateral branches are, undoubtedly, natural philosophy, chemistry, natural history, and botany; and it is deserving of your consideration, whether in future these branches should form a separate faculty of natural knowledge, or be conjoined with that of medicine? That the student of medicine must derive

as much benefit from the study of natural philosophy and of natural history as he possibly can do from that of chemistry and of botany, is a point which will I believe be contested by no one who is in any degree acquainted with the relations which these different sciences bear to medicine.*

'It may be deserving of your consideration, whether this may not be the proper time to introduce some changes into the constitution of the faculty, strictly medical? Whether, for example, the duties at present performed by the professor of the theory of medicine, should not be assigned to two distinct professors at least—physiology to one, and pathology to another? The discoveries which have been made, and which are daily making, in each of these branches of medicine, are of such extent and importance, as to render it quite impossible, it is conceived, for any professor, whatever his talents and assiduity may be, to give a sufficient account of either of them, in a period shorter than that which is allotted to the course of medical lectures in the University of Edinburgh.

'It may be worthy of your consideration, also, whether surgery, a branch of so great extent and importance, should not be taught by a distinct professor, and that professor a practical surgeon?—whether lectures on clinical surgery be of less importance to the great majority of those who receive medical degrees in the University of Edinburgh, than lectures upon clinical medicine?—and whether the course of medical jurisprudence should not be added—as that of midwifery has lately very properly been—to those classes, an attendance upon which is necessary for graduation?'

The imperfect education of their pupils has been a common source of regret among medical teachers for a century past. With what possible interest can a man of talent, learning, and great professional research, address his hearers on the various and intricate matters to be treated of in a course of lectures on physiology, or on the nature and operation of medicines, or on the practice of physic and surgery, if he supposes more than half of his hearers to be quite unused to any mental exercise, wholly unembued with any love of science, gross and low in their views of the profession, and looking forward to it merely as a trade by which they are to live. Pupils of this description will never do credit to their master; and the probability is, that they will disregard his lessons exactly in proportion to his superiority over themselves. These are the uninstructed young men who take delight in the shorter roads to practice, which cunning and unprincipled persons profess to point out to them; and, regardless of the principles by which alone their practice could be safely guided, seek a hasty and presumptuous information from cases, and analyses, and vade-mecums, and all the superficial and unsound literature of the profession. For these, and

* See Boerhaave's "*Methodus Studii Medici*," Vol. I.

many other, and more serious evils, the only remedy will be found in a careful education. That such an education is far less general in the medical profession than it ought to be, is proved by the character of a considerable proportion of the medical books which issue from the press, and, as we think, by the actual state of its periodical literature, which is of course that supposed to be best adapted to the taste and feelings of that part of the public who are expected to buy and read. Not a year passes in which instances do not occur which very plainly prove how little influence medical men possess over the higher classes of society in subjects on which their opinion ought to have the greatest weight. In domestic medicine, in diet and regimen, in various questions interesting to unprofessional persons, we find the public to be materially influenced by authorities whose very names are a satire upon medical science. It might almost be said, perhaps, that quackery is natural to the human mind; but believing, as we do, that it is more common among the educated than the uneducated, we cannot but attribute this, in a great measure, to a want of that reliance on the medical adviser in these classes, which is more implicit and deferential in persons of more limited acquirements. Every successive absurdity finds a support in men who call themselves surgeons or physicians: Johanna Southcote; the metallic tractors; Prince Hohenlohe; the white mustard-seed. Of these things the public are not ignorant; and although it may very reasonably be doubted, whether the easy morality of men may not have as much to do with this as their ignorance, yet surely their morality might be improved, and their disgraceful ignorance prevented, by such an education, previous to their beginning the study of the profession they degrade, as has been recommended by various men of character and ability.

We are accustomed to think and speak of America as of a country yet advanced but a very little way towards the intellectual greatness and general refinement conspicuous in our own country. Yet Dr. Hosack, on commencing a course of lectures on botany and the *materia medica*, in Colombia college, at New-York, upwards of twenty years ago, spoke in the following terms to his auditors:—

‘I presume the greater part of you have entered upon the study of physic, prepared with the knowledge of the usual preliminary branches of classical education; that you are acquainted with those languages which are employed as the common vehicles of learning at the present time,—the Greek, the Latin, French and German languages; that you are acquainted with belles lettres, geography, the elements of mathematics, and natural philosophy, together with

an outline of the faculties of the mind, and of the history of human society. But to those of you who have not yet had opportunities of a regular course of collegiate education, and, from your time of life, are still desirous of entering immediately upon medical study, I must recommend so to divide your time, that you may appropriate a portion of it to the several subjects I have enumerated, under the direction either of private teachers, or of the professors of the college, as far as your circumstances and several situations will admit. Curiosity, as well as duty, will lead you to subjects of this nature, by which you may not only become better acquainted with your profession, by which you may not only learn the numerous improvements medicine has received, and is daily receiving, in different parts of the world; but by which you will also add to the natural strength of your understandings, and thus furnish your minds with resources to meet the numerous difficulties you are to expect in the practice of physic; and be assured, that, in the prosecution of those subjects, whether you are engaged in the study of language, the demonstrations of geometry, or in examining the principles of philosophy, either of mind or matter, you cannot spend an useless hour. The mind, capable of observation and improvement, will find, in these preparatory branches of learning, not only subjects of gratification, but of real use.'

If such were expected to be the qualifications of young men born in the United States or in the West India Islands, they were surely greater than those which most lecturers in this country would have had any right, or would now have any right, to presume upon as possessed by their hearers. But, it may be said, it is easy to expatiate on the undeniable advantages of a good education; but how is it to be acquired? In England, we confess, that many difficulties exist in the way of it. Supposing that a useful education could be obtained at Oxford or Cambridge, it has long been impossible for one twentieth part of the young men desirous of education to be admitted there. No means have been afforded to us, as in Scotland, of gathering literary or scientific information in the intervals of our habitual occupations; and consequently, those who have not been at either of our two universities, have had no more than a school-boy's education; whilst those who have, on account of the system pursued there, have in many instances merely had a school-boy's education of a longer continuance. In almost every other country in Europe, and in many, if not in all of the states of America, institutions exist which enable men, not only to acquire the inestimable benefit of an education well begun and carefully conducted, but also of prosecuting any subject to which they may have become attached during those very important years which intervene between the escape from the restraints of a boy, and an engagement in the

pursuits of a man. Richer than many of the smaller *kingdoms* of Europe, and containing a population nearly as great, *London* alone, of all the capitals of Europe, has no university in which what is truly deserving of the name of a liberal education can be acquired. The immediate consequences of this disability, we in part pointed out on a former occasion; and it is on this account, that we cannot but feel an extraordinary interest in an event which will take place in a very few days after the publication of these pages;—the foundation of a noble institution, in which every branch of learning and science will be taught, on terms, and according to an arrangement, which will throw open to the active and intelligent classes of this country, all those opportunities which so many circumstances now render indispensable to individual advancement. We know the objections that have been made against this great undertaking; but, always excepting those who are surrounded by the thickest night of prejudice, we could never well understand how the establishment of a collection of schools, each excellent in itself, could ever excite apprehension or anger in any person in a perfect state of sanity. It would be very strange, if an university, founded in the capital of this country in 1827, under the immediate auspices of men of rank and character, and eminent for attainments and practical ability,—men who have not, in devising this great undertaking, submitted their understandings to the restraint of copying any one previously existing model, or been compelled to regard any object but that of promoting all kinds of useful knowledge,—should not have many advantages over all other institutions of the same nature, and prove as durable as those which most challenge our veneration. We think we may venture to predict, without indulging in a very hazardous spirit of prophecy, that in the *London University*, whilst what is valuable in more ancient schools of learning is retained, and what is found useful in more modern institutions is adopted, the inconveniencies which have entwined themselves round older establishments, the prejudices which beset, the forms which obstruct, and the faults which deform them, will be wholly avoided. If there should be any one of our readers who feels surprised that an institution which he may have heard alluded to as a contrivance of atheism, or the first stone of a revolution, should thus be spoken of by us,—we trust that the principles we have repeatedly expressed, will, as far as we are concerned, save us from any suspicion of indifference on political or on religious subjects; and for more information on the proposed university, we must refer him to the *Thoughts on the Advancement of Academical Education in England*, which he will find cha-

racterised by a candour and moderation that might be advantageously imitated by the enemies of all advancement but their own.

The probable importance of the new university, as including a medical school possessing many advantages, has already been ably shewn by one of our own profession, Dr. A. T. Thomson, whose *Thoughts on Medical Education* contain an outline, excellent in almost all its parts, of the system which should be observed in bringing up a youth to medicine or surgery. His observations on the unfavourable influence of the custom of serving apprenticeships, the interruption thus given to education, the prolonged and servile indolence it entails, the late and disadvantageous application to objects of importance it causes, and the peculiar obstacles it places in the way of attaining, at any future period, a sound knowledge of surgery and medicine, are very forcibly urged, and doubtless founded on undeniable facts. He shews that this custom is not only open to all these objections, and to the not less serious one of infecting all who have been governed by it, to a spirit of mere *trade*, but also that it is in every point of view unnecessary. If this pernicious custom was abrogated, the education of the boy might be perfected, and that of the man would be commenced with every needful help. Under such an arrangement, the plan of collegiate study marked out by Dr. A. T. Thomson, in the following passage, and which, under present circumstances, appears impracticable and visionary, would not only be acted upon, but would be the easiest and the best that could be followed:—

‘I will suppose that the building for the university is completed; that the lectures are about to commence; and that a young man presents himself to be admitted as a student of medicine. I must presume that, before his wish can be accomplished, the rules of the establishment will require that he be examined regarding his attainments in classical literature. To what extent these may be requisite, it is not my intention to inquire; but certainly the candidate should possess such a knowledge of the Latin and the Greek tongues as may enable him to read the ancient medical authors in the languages in which they wrote. And, besides, as medicine is a profession which elevates its followers to the rank of gentlemen, the student who is desirous of attaining eminence, should possess that portion of classical learning which every gentleman is presumed to have acquired. Mathematics is another branch of general education which every student of medicine should have studied, to a certain extent, before commencing his medical education; for, if it be no difficult task to prove that a knowledge of the principles of mechanics is essential in a complete medical education, it must be obvious, that mathematics, as a preliminary study, cannot be dispensed with, even were

no other advantage obtained from the study of that branch of science, than the faculty of following a chain of close and abstract reasoning, which it bestows. The student who enters for medicine should also have a knowledge of drawing; or as much of it, at least, as will enable him to delineate, with facility and accuracy, the parts of the human body, both in the state of health and of disease. It is, indeed, astonishing, that the art of drawing is still so totally neglected in the education of medical men,—when the advantages derived from that accomplishment by a few members of the profession, who have made it an object of study, are so generally known. Besides the facility which drawing affords of rendering permanent diseased appearances of a changeable character, and of communicating ideas of them to others, much more accurate and satisfactory than could be accomplished in many pages of description in words, that delightful art confers upon its votaries almost an additional sense. He who draws the appearances which any object presents, will examine that object more attentively and accurately, and retain a more correct idea of it, than another person, equally interested in gaining a correct idea of it, can do; because the very habit of examining objects with attention, in every point of view, enables him to see parts which are overlooked by others; and the repeated examination which is required to enable the draftsman to give a correct delineation of the object, fixes it indelibly in his memory. He attains as much accuracy of sight, as the artisan who works in very minute objects acquires of touch; the one seeing and the other feeling circumstances which are not perceptible to others in whom these senses have been less exercised. The student who can draw obtains also a more exact notion of the relative positions of parts, and remembers them better. As a branch of preliminary education, therefore, the art of drawing should, in my opinion, be required to be known by every youth beginning his medical studies at the new university; and both in mathematics and in drawing, the examinations should not be a mere categorical inquiry, and the exhibition of drawings done at home; but the candidate for admittance should be forced to work a problem in Euclid, and to make a drawing either of a preparation of a morbid part, or of a portion of the recent subject, shut up in a room by himself. A high degree of perfection should not be expected; but the proficiency of the candidate ought to be such as should convince the examiners that he understands enough of these branches of general education, to render them usefully subservient in promoting his acquirement of those parts of the study of medicine, anatomy, surgery, and pathology, which they are calculated to assist.

It may be objected to such a preliminary examination, that, in requiring some knowledge of mathematics and of drawing, more is expected from the students than the first professors themselves will probably possess; since few medical men, even of deservedly high reputation, are acquainted with the use of the pencil. But although the truth of this remark be admitted, yet it does not weaken the argument in favour of the propriety of enforcing, in those who may

henceforth commence the study of the profession, an attainment of such preliminary acquirements.

‘Having determined upon the kind of knowledge which every student who enters for medicine in the new university should possess before he can be admitted, let us now attempt to arrange those studies which should occupy his attention whilst there, supposing that four sessions of six months, or three of eight months, be the period required to complete his medical education. Before proceeding, however, it is proper that the modified sense in which the word *complete* is used here should be understood; for it must not be imagined that the term alluded to is nearly adequate for the acquirement of such a degree of information as would enable any individual to practise his profession satisfactorily to himself or beneficially to the public. On the contrary, I am of opinion, that the moment a practitioner ceases to be a student, he is no longer worthy of the confidence of the public; and that the life of a physician can only be truly useful and honourable, when it is unremittingly employed in study, in determining the truth of theoretical opinions by observation, and in proving the value of practical suggestions by the test of experience. The word *complete*, therefore, is here intended merely to imply that portion of elementary knowledge which a student can receive at college, and which will enable him to commence practising upon sound principles. And having said this much, I will now proceed to lay before you that plan of study, which, in my humble opinion, is calculated to lay the foundation of an efficient and satisfactory practice.

‘I propose to divide the course of medical studies into three stages,—preparatory, progressive, and practical. The first, or *preparatory* stage, or division, comprehends those studies which convey a knowledge of the forms of bodies and of their parts or fabric, and the most generally adopted arrangements or classifications of natural objects, viz.—Natural History; Systematic Botany; Descriptive Anatomy.

‘The second, or *progressive*, to embrace those studies that contribute to develop the laws which regulate inorganic matter and the functions of organic bodies:—Natural Philosophy; Chemistry; Phytology; Physiology; Moral Philosophy.

‘The third, or *practical*, to consist of those studies which convey a knowledge of the ultimate objects of the profession of medicine; and, consequently, teach the application of the previous studies:—Materia Medica and Pharmacy; Pathology and the Practice of Medicine; Surgery; Obstetrical Surgery and Medicine; Medical Jurisprudence; Medical Ethics.

‘During the period required for the studies of the second and third divisions, the student ought to be occupied, daily, for two hours at least, in the dissecting-room, under the direction of an assistant of the professor of anatomy, whose sole duty should be to guide him in his dissections, and to demonstrate the parts dissected; and, during the period of the third division, besides attending regularly in an hospital where *clinical lectures* are delivered, no oppor-

tunity of assisting at the dissections of diseased bodies should be neglected.'

The divisions of study recommended in the above passage may be the subject of some difference of opinion; but the plan altogether is based, without doubt, on views which are equally liberal and correct. In the more detailed description given by Dr. Thomson of the several parts of this plan, as reduced to practice, the reader will find there is at least nothing recommended which tends to convert him who is to be an active and bustling practitioner, into an indolent or speculative student; and, certainly, if the duties of the professors should be regulated according to the plan he has sketched for them, the latter gentlemen will not be open to the reproach of holding sinecures. In illustration of this last remark, and also on account of its connexion with the former part of our observations, we shall insert the passage which treats of the duty of the clinical professor.

'Let us first suppose that an hospital could be attached to the university. What should its character be? and how could it be supplied with such patients as would be required, from time to time, to illustrate the progressive lectures on the practice of medicine? In my opinion, such an hospital should consist of four wards only; two for the reception of purely medical cases, and two for accidents and surgical cases. The surgical wards I shall notice in their proper place: of those for the reception of the cases of general disease, or medical cases, as they are usually termed, I would propose that one, which should be termed the *clinical ward*, should be of moderate dimensions, for the reception of cases of those diseases on which the professor of the practice of medicine is at the time lecturing. Thus, if fever be the subject of his discourses, cases of the genera and species of that class of diseases only should be found in the clinical ward; and, for the same reason, specimens of each class of diseases should successively be found there during the session; whilst the other, which should be the larger ward, should receive those cases which are still under treatment, although no longer required in the clinical ward, and those which have not been yet received into it. The treatment of the cases in the clinical ward should not be confined to one physician; but all the medical professors should be required to attend that ward, in turn, for a given period; and during that term to deliver daily a clinical lecture immediately after the visitation of the ward. These visits should be made in the morning, as is the case in the Parisian hospitals, before any of the lectures commence; the patients being then more able to bear the intrusion and noise of the pupils, none of whom should be permitted to repeat his visit to the ward on the same day, unless he be appointed to superintend a case by the physician; which should be a part of the duty of each student who is attending a second course of the lectures on the practice of medicine: the pupil should be required also to write a statement of the

case, and the rationale of its treatment. The detail of the symptoms, and the progress of the cases in this ward, as well as of their treatment, should be declared aloud by the visiting physician, and entered in the case-book of every student.'

'During the clinical lecture, the more advanced of the students should be called upon by the physician to give a prognostic of the probable issue of any of the cases which he may fix upon for that purpose, and to state the grounds on which their opinion is founded. In the examinations also on this branch of their studies, which should take place at least twice a week, cases should be detailed by the professor, and the students should be required to name the diseases, and to state the treatment requisite for the mitigation or the removal of the symptoms. Experience, which is the foundation of all knowledge in medicine, must rest either on the evidence of our own senses, or on the testimony of others. It is on the former that the physician chiefly relies; but the pupil who has the opportunity of seeing the instructions of a lecturer on Pathology and the Practice of Medicine, illustrated by cases in a clinical ward, enjoys every advantage that both kinds of testimony can afford. It is by such a mode of teaching only that he can be guarded against those metaphysical and chimerical hypotheses which have always corrupted, and which still continue to deform every branch of medicine; and, thus instructed at the bed-side, he acquires early such habits of observation and of discrimination as will enable him to commence the actual practice of his profession with a confidence in himself, and a satisfaction to the mind, which I do not hesitate to affirm is now rarely felt, except by practitioners of some years' standing.'

We might object to some of these suggestions, as we did to some of those of Dr. Clark, and on the same grounds. As we do not find that ready expression can be given to much that is very valuable in the practical knowledge of medicine, so neither do we think that to describe, and discuss, and discriminate, in a public lecture-room, can really form a useful part of a clinical system. The great object of the professor of this important part of learning is to direct his pupils insensibly into those silent trains of thought which lead to truth; not to prepare them for a fluent detail of appearances, prognosis, diagnosis, indications, &c. &c. &c.; but if possible to make them able promptly to see and understand them all. Such an opportunity of *showing off* before the Professor as would be afforded by being called upon during a lecture to give a prognostic, would, we fear, make the shallow and easily satisfied student incurably vain, and often drive him of a finer constitution of mind to despair. Many of the mental processes which are performed in the practical exercise of our profession are too subtle, the comparison exercised upon an infinite number of minute circumstances is

too rapid to be readily, or perhaps usefully put into words except for the purpose of teaching others: the facility of speaking on matters of this kind may certainly be required; but we doubt whether or not the acquisition would be at all useful to the student.

Here, we must conclude our observations, which are offered with due humility, and without the least admixture of personal feelings on this important subject, at a conjuncture when some of the most eminent among the scholars of the justly-venerated University of Edinburgh are coming forward each with his candid opinion and advice. However much different men may vary in their view of the best method of obviating the disadvantages of the old method of teaching, there is certainly one conclusion to be drawn from their labours, which none who are interested in the continued prosperity of schools already established can prudently disregard; namely, that forms, and plans, and systems of education, which were suited to the state of society even a century ago, require review and modification. To resist this on every occasion, and to revile those who propose it, is not more wise than it would be to live in a house with an obstinate determination never to let the ancient and admired structure be repaired: when once the work of decay and dilapidation is fairly commenced, if such a pertinacious resistance of repairs is continued, every year adds to the insecurity of the building, until a noble edifice, which might with care have been preserved and admired for ages, becomes an object of contempt and derision; and at last, to the great satisfaction of all the neighbours, falls into ruins altogether.

V.

ANATOMICAL AND PATHOLOGICAL RESEARCHES.

Mémoires, ou Recherches Anatomico-Pathologiques sur la Ramollissement avec Amincissement, et sur la Destruction de la Membrane Muqueuse de l'Estomac, et sur l'Hypertrophie de la Membrane Musculaire de l'Estomac, dans le Cancer du Pylore. Par P. CH. LOUIS. Paris, 1826.

MUCH as dyspeptic diseases have lately engaged the attention of British practitioners, little advance has been made in our knowledge of the pathology of the stomach. The morbid appearances resulting from long disorder, at least where the characters are decided, are perhaps tolerably well known, but the progressive symptoms, from the commencement in mere functional disorder, to the final disorganisation, have been little traced. We are consequently still ignorant of any

accurate means of diagnosis, excepting in extreme cases; and the length and obstinacy of the complaint are mentioned by so acute and practised an observer as Dr. Baillie himself, as the sole criterion of organic disease. In the memoir of M. Louis some attempt is made to supply this deficiency in one disorder of the stomach; viz. that which is accompanied by softening, attenuation, and sometimes the complete destruction of portions of its mucous coat.

This condition of the organ is very frequent in chronic diseases; particularly in phthisis pulmonalis. There are several instances also related in which it accompanied a scirrhus state of the uterus; and it seems to be far more common in women than in men. It is occasionally found in patients who die from fever, one example of which is given by M. Louis.

The external appearance of the stomach is described by this pathologist as exhibiting nothing remarkable. Its volume, however, was much varied; in some instances being very large; in others having only its natural capacity. Internally there were pale bands or patches irregularly disposed throughout the surface of the mucous coat, and these bands were observed to be somewhat deeper than the other parts of the membrane. The depression in these places differed from the depression consequent to ulceration, in having no defined border; and the depressed portion was only more tender than the surrounding tunic. The mucous membrane itself occasionally disappears from these points, or is changed into a kind of glairy mucus, without the slightest trace of membranous structure.

The colour of these bands or patches is white, grayish, or sometimes approaches scarlet. Small black spots, resembling petechiæ, are also observable.

This affection does not appear to be confined to any one portion of the stomach, but to be diffused impartially over the whole surface.

The submucous tissue, with two exceptions out of the twelve cases reported by M. Louis, was perfectly healthy. In these two instances it was much softer, and more easily torn, than when in a sound state. In some other examples, this pathologist was disposed to believe the structure in question somewhat denser than usual; but the alteration was not sufficiently manifest to decide certainly upon it.

In addition to the attenuation and softening of the stomach just described, the surface of the internal membrane exhibited other morbid appearances. It was in some instances very red, and as it were inflamed, and in parts granulated. Ulcerations also were evident.

The symptoms by which this affection is indicated are tolerably uniform in kind, but vary greatly in degree, and the rapidity of their progress.

Indigestion was universally present in M. Louis's cases, and could be sometimes traced backwards for several years. The loss of appetite and commencing emaciation could generally be dated from the same period. The following was the common progress of the disease :—

After simple indigestion had continued for a longer or shorter time, the patient experienced a diminution of appetite, pains in the epigastric region, with shiverings, alternating with heat. The thirst was in some cases intense, and after a longer or shorter space, varying from a few days to several months, nausea and vomiting succeeded. There was considerable variety in the succession of these symptoms, though in the progress of the complaint they were always observable. Their intensity, however, was not always correspondent to the serious nature of the affection.

The pain at the stomach varied in degree, and in the facility with which it was excited. In three cases the smallest quantity of food, whether liquid or solid, materially aggravated it. Pressure was always painful.

The tongue, upon the appearance of which so much stress has been laid as a sign of diseased mucous coat, presented nothing decisive. In four patients it was perfectly natural; in three others, a little reddened at the point; and in an eighth the papilli were enlarged, and florid. Throughout the whole course of the malady it preserved exactly the same appearances, and in no degree varying with the advancing stages of the disease.

This affection of the stomach, in the cases related by M. Louis, was always a concomitant of some other malady, and most frequently upon phthisis pulmonalis. Hence it has been impossible to estimate its influence in diminishing the strength; but when the severer symptoms were manifested, as acute gastrodynia, and vomiting, the patient always sunk rapidly. It must, however, necessarily exhaust the constitution more quickly than the original disease would have done alone. It is in truth an additional source of irritation.

With respect to the hectic fever which was present, a considerable doubt may exist, whether it was excited by the original disease, or by the disorganization of the stomach. Our own experience, however, would incline us to say, that real hectic is a very rare attendant upon stomachic complaints.

We have already stated that the deviation of this affection was exceedingly varied. We have only to add, that when its duration is longest there are often deceptive appearances of

recovery. In one or two instances, indeed, the organic disease of the stomach appeared to have been considerably ameliorated, when the patient was suddenly carried off by an affection of some other organ.

M. Louis has dedicated one section to the diagnosis of attenuation and softening of the stomach. And referring to the results afforded by the cases previously reported, he states that in every instance the appetite and digestion were much impaired, and frequently long before the manifestation of any serious symptom. Fever, nausea, and vomiting, were constant; and these were either preceded, accompanied, or followed by pain in the epigastrium.

In reflecting upon these cases, the question immediately presents itself,—what is the nature of this affection;—is it a consequence of inflammation, or is it a diseased process, *sui generis*? From a comparison of all the symptoms, the former appears the most probable; for we have all the constitutional and even local phenomena of inflammation. There is increased heat of urine, rapid pulse, tenderness upon pressure, and, upon examination after death, a greater vascularity than usual. At the same time, it is remarked by M. Louis, that the cutis itself is softened, and even destroyed by the inflammation excited by a blister; a phenomenon analagous, it may be supposed, to the softening of the mucous membrane, and that this tunic itself is also subject to ulceration, and granulative processes, which are acknowledged, on all hands, to be the results of inflammation.

As this disease was always an attendant upon others, very little can be said certainly of its prognosis. The disorders which it accompanies are generally fatal themselves; the fatal event is probably accelerated by this additional affection.

Regarding the thinning and softening of the stomach, as inflammatory, the treatment must necessarily be antiphlogistic; but active measures must always be inadmissible. We know indeed few circumstances which demand greater sagacity from the medical attendant, and we may add, greater caution, than chronic diseases, attended by local inflammation. It has, we apprehend, been fully proved that excessive depletion has a tendency to increase rather than to diminish that unequal circulation, from which topical inflammation, in some measure, proceeds; but it is not less certain that stimulants, without great vigilance, are exceedingly injurious: it would lead us much farther than either our space or time would permit, to discuss the grounds at length upon which the treatment of such cases should be founded. We shall only state, therefore, that both stimu-

lating and depleting measures may alternately be requisite, and far more beneficial than either would be alone. To determine the precise point, however, when they should be employed, must be left to the practitioner himself, whose study ought to have the solution of this very difficulty for its object. It requires little to deplete largely in all cases, or powerfully to stimulate; but to watch the progress of a complaint, and to recur to either plan, as symptoms may demand, discriminates the rational physician from the impudent and daring empiric. One of the greatest difficulties, however, attending this complaint, is the regulation of the diet; for not only does the stomach in the latter stages reject almost every article of food, but in the earlier stages the appetite is most capricious; and nausea, if not vomiting, most easily excited. It is also a curious circumstance, though not peculiar to this *particular* disease of the stomach, that aliments commonly esteemed among the most indigestible, are often taken without the slightest inconvenience. In the instance of a lady with diseased uterus, in whom the symptoms of attenuation of the mucous membrane were present, very different aliments were relished at different periods of the complaint; and oysters were retained upon the stomach when every thing else was rejected. No rule can therefore be laid down beyond that of consulting the appetite of the patient, and guarding against error, not in the quality, but in the quantity of the food. Towards the fatal termination, it will often be impossible to give more than a few teaspoonsful at once, and then whatever fluid is given, may be combined with isinglass in solution. The use of wine and spirits must be governed by the circumstances of the case, but it will seldom be found either advisable or possible to omit them. Not unfrequently the patient must be supported for the last days of life by their means.

In making this latter observation, it may be permitted us to remark upon what we have unfortunately frequently witnessed, an indifference in medical men to the means of sustaining life, when a fatal event must certainly, in no long time, ensue. They appear, indeed we may speak more decidedly, and say, that they do consider it unimportant whether a patient live one or two days, when life draws so nearly to a conclusion. But we would remind them, that the train of reasoning by which they are led to such an inference, pursued to its legitimate consequence, will go very far to justify an indifference to human life altogether. If a few days are of no importance now, ere long a year or two may be of no consequence; and thus the destruction of infants by the Chinese is perfectly lawful, and the

Hindoos may be justified in exposing their aged parents. We cannot look without fear upon this defect in the moral character of our profession, because every such defect has a tendency to increase. "*Nemo fuit repentè turpissimus.*"

"Vice, to be hated, needs but to be seen;
But seen too oft, familiar with her face,
We first endure, then pity, then embrace."

But, independently of the inroad thus made upon the moral feeling of the individual, some regard may surely be had to the feelings, and even the advantages of the surviving friends. Painful as is watching the dying-bed of a dearly beloved relative, circumstances may render even this consolatory, and a melancholy pleasure may be experienced in prolonging the last earthly intercourse that we can hold with one another. And if human feelings are important to human beings, he must be more or less than man who can rudely hasten the final separation. For ourselves, we can truly say, we dare not do it: the sentiment of Terence, so often quoted, yet so little regarded, ought, we think, to be the steady principle of every medical practitioner, "*Homo sum; humani nihil à me alienum puto.*"

But we would yet further urge, that the prolongation of life, even for a single day, may, in the complicated state of society, be important to the interests of surviving friends. Property may be inherited or lost, according as an individual may die a few hours sooner or later. With us, this consideration is less important than the former; but it may happen that some minds will be influenced by this argument, who could scarcely comprehend the obligation of the other. But, at last, the office of the physician is to bring consolation into the house of sickness; and where he cannot restore the health, or save the life of his patient, still his comfort is to be consulted, and, as far as possible, the comfort of the surrounding friends. And if a medical man entertain a proper sense of his duty, his attentions can only end with the last breath of his patient. Till then, there are many little directions to be given, that may serve to alleviate the misery of a dying bed.

To return, however, to the subject of the memoir. M. Louis is inclined to believe, that attenuation of the stomach is not excited by the use of spirituous and vinous liquors; or, at least, that this is not its principal source. His arguments are drawn from the circumstance of the greater number of these affections having occurred in women, who are not so much addicted to the vice of drunkenness as men are; and also from the rather curious fact, that the patients who have recovered after taking acrid poisons are not more liable to

severe stomach disease than others. In truth, M. Louis relies so much upon the strength of his arguments, that he says, ' the experience of every succeeding day makes it more probable, that the abuse of strong liquors is neither the most usual nor the most powerful cause of disease of the intestinal mucous membrane, and that their stimulating effects are very temporary, excepting in individuals peculiarly predisposed to maladies of the stomach.'

That some predisposition must exist, is perhaps probable, if not certain, let the disease excited be in whatever situation or of whatever nature it may; for exciting causes can only be supposed to act where there is a disposition to be excited; hence it is, that the same excitants produce in different individuals different maladies. High living and luxurious habits give rise in some cases to cerebral affections, in others to organic disease of the stomach, and in others to disorder in the functions, and eventually to change in the structure of the liver: yet, we apprehend, that it would be bad reasoning to disjoin in these cases the manifest cause and effect. We should only say that the irregular habits of life had excited disease in that organ which was weakest, and which could least bear any interruption in, or interference with, its function.

Neither are the actions of acrid poisons in so great a degree analogous to those of spirituous liquors, as to permit any inference from one to the other. Where the stomach is directly affected by poison, it is most certain that the powers of digestion are weakened, or, indeed, for the time annihilated; but at the same time it should be remembered, that this is the consequence of the direct application of the poison, and that the constitution is not primarily concerned. When, on the other hand, strong spirituous liquors are taken in abundance, there is double action; we have the immediately stimulating effect of the spirits, and the effects resulting from their reception into the circulation. The stomach is thus not only affected locally, but in common with the other parts of the animal system.

But while the facts upon which M. Louis rests are inadequate to the support of his opinion, the daily experience of medical men in this country is decidedly opposed to it. We know no fact so well established as that drunkards have very feeble digestive powers, and the worst cases of stomach disease that have fallen under our notice have occurred in such individuals. It is true, that, according to the strength and original constitution of the patient, different periods have been required before the consequences have been manifest. We could, however, almost assert positively, that we have

known no instance of habitual drunkenness which was not finally succeeded by organic disease of the stomach. We suspect, however, that we have far more abundant opportunities of deciding this point than the continental nations can have. We would it were otherwise.

We subjoin to this account of the attenuation and softening of the mucous membrane, a case in which the muscular coat was much stronger than its natural condition. A cancerous state of the pylorus existed at the same time. The symptoms were those common to this disease. The following is the description of the appearances found after death, as related by M. Louis:—

The stomach was very large, and was contracted into a cylindrical form for two inches and a half from the pylorus. Its thickness in this part was from fifteen to eighteen lines. The parietes of the stomach, with the exception of the above-mentioned cylindrical portion, were more than double their natural thickness and firmness. The difference existing in this respect was exactly of the same kind with that of the hypertrophied heart. The thickening and increased firmness were the consequences of an increase in the muscular structure of the organ. The strength of the muscular fibres varied in different parts of the stomach; but was the most remarkable in the neighbourhood of the pylorus. The colour of these fibres was not altered; but they were more closely set than usual, and more manifest through the mucous membrane. This membrane itself was very pale, soft, and without any alteration in its thickness. The cylindrical portion was so contracted, that it scarcely admitted the little finger in its widest part, and towards the centre was not more than half an inch in width. The parietes of this cylindrical space were from five to seven lines thick, and presented, on tracing it from within outwards, a gray colour, then a white, then a bluish appearance, and, lastly, a milky white colour. These different tints corresponded to the mucous, submucous, and muscular membranes, and to the cellular tissue, interposed between the last tunic and the peritoneum. Two inches above this part, the mucous membrane was softened, but not thickened; but as it approached the cancerous part it was thicker, and presented granulations without ulceration—*gros mammelons sans ulcération bien évidente*. To the commencement of the scirrhus, it was easily separated; but beyond, could only be dissected off with the scalpel. The cellular tissue in this part was very firm, and could be only removed by careful dissection from the subjacent muscular tunic. This last was of a bluish semi-transparent appearance, traversed, as in its healthy state, by cellular tissue,

which had undergone the same alteration with the submucous membrane.

We do not think it necessary to pursue this description, as the remainder relates nothing to the change in the muscular coat. It has hitherto been only observed in connexion with scirrhus of the pylorus.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. On the State of Fecundity in different Parts of Europe.

A VARIETY of ingenious speculations have been offered from time to time by philosophers, concerning the causes which promote or retard fecundity. In this inquiry, as in many others in which the differences of opinion are so great between different authorities as to make reconciliation hopeless, the examination of certain pretended facts in the outset of the discussion, would probably have brought the contending parties a little nearer to each other. Fecundity has been ascribed to temperature, soil, diet, situation, and other circumstances; but the decided superiority of any one country over another in this respect, has not yet been so incontestably proved as to warrant conclusions drawn from a supposition of its existence. M. Benoiston, of Châteauneuf, has been engaged in some investigation on this subject, of which an account is given in the *Revue Médicale* (Decembre).

With respect to the influence of *temperature* in promoting fecundity, he remarks, that if we divide Europe into two distinct climates, a southern one, beginning with Portugal and ending with the Netherlands, or from the fortieth to the fiftieth degree of latitude; and a northern one, extending from Brussels to Stockholm, or from the fiftieth to the sixty-seventh degree, we shall find the mean product of each marriage to be—

| | | | |
|-----------------------|---|---|--------------|
| In the first division | - | - | 4.57 births. |
| In the second | - | - | 4.30 ——— |

and that if we compare the two extreme temperatures, the difference is yet greater, namely,

| | | |
|-------------|---|----------------------------------|
| In Portugal | - | 5.10 children for each marriage. |
| In Sweden | - | 3.62 do. do. |

France offers another example, the fecundity increasing, according to Moëheu, from the north towards the south, as

| | |
|------------------------|---------------------------------|
| In the South of France | 5.3 children for each marriage. |
| In the North of France | 4.64 do. do. |

These calculations are founded on returns made in 1821, 1822, 1823, and 1824, and seem to indicate the operation of temperature very decisively: when compared, however, with other facts, they shew no more than that temperature is one among several causes, which apparently modify human fecundity, but not the chief cause; for although 5·10 is the mean proportion of children to each marriage in Portugal; 5·20 is the proportion in Bohemia, and 5·25 in Muscovy. In Moravia and Silesia it is 4·81; but in France and Holland only 4·20; in Sweden, 3·62; and in England, according to M. Benoiston, only 3·50.

As a means of determining the question, M. B. has grouped together those European countries in which the fecundity of marriages is the greatest; and the mean proportion of children to each marriage is thus given:—

| | | | | |
|-------------------------------|---|---|---|------|
| Portugal | - | - | - | 5·14 |
| The Province of Braganza | - | - | - | 5·65 |
| Muscovy | - | - | - | 5·25 |
| Venice (State of) | - | - | - | 5·45 |
| Bohemia | - | - | - | 5·27 |
| Canton of Fribourg | - | - | - | 5·35 |
| Alsace (Lower Rhine) | - | - | - | 5·03 |
| Part of Brittany (Morbihan) | - | - | - | 5·52 |
| Part of Poitou (Venelée) | - | - | - | 5·46 |
| Travehe-Comté (Jura) | - | - | - | 5·01 |
| Marne (Mayenne) | - | - | - | 5·09 |
| Lyonnais (Loire) | - | - | - | 5·68 |
| Roussillon (Eastern Pyrenees) | - | - | - | 5·17 |
| Part of Dauphiné (Upper Alps) | - | - | - | 5·39 |
| In many Scotch villages | - | - | - | 5·13 |

As this list includes northern and southern countries, coast and inland situations, mountainous and low regions, it is yet to be determined, supposing all the data to be exact, to what the differences are attributable. Seven of the countries indicated, M. Benoiston remarks, are mountainous; Brittany, Roussillon, Scotland, Savoy, the county of Nice, the canton of Fribourg, and Travehe-Comté; and these, he adds, are fine countries, or such as afford an easy existence to their inhabitants: even Savoy, he says, comes under this description, because the emigration of its most indigent people enables those who remain at home to gain a livelihood: nor is Russia excluded from it, the condition of the serfs being easy.

The influence of a residence on the sea-coast upon fecundity, is certainly not well established; and it is probable, that all single causes which have been supposed to impede or promote it are equally doubtful. It appears much more reasonable to imagine that the fecundity of a country should depend on the general causes which influence human health and comfort, exclusive, in a great measure, of mere climate. Wherever existence is easily supported, there we find an abundance of children; and this seems the only conclusion to which M. Benoiston's most diligent researches have conducted him.

II. *Human Bezoar.*

A SPECIMEN of one of these substances was not long ago presented to the French Academy of Medicine, by M. Caventon. It was discharged from the intestines of a female patient, aged fifty-six, who had been subject to constipated bowels during her whole life, and had four times been attacked with the iliac passion. It was after an attack of this kind that the concretion was passed. For three days before the attack there was fixed and unusual pain above the left kidney; the bowels were so shut up that even flatus did not escape: there were frequent vomitings of bilious and mucous matters; slight distension of the abdomen, pains in the epigastrium; anxiety, fever, hiccup, delirium, faintings. After six days of imminent danger, diarrhoea supervened, and then the bezoar was evacuated, after which the patient completely recovered.

The weight of the bezoar was three drachms, its circumference two inches and a half, its colour a bluish gray, with white spots, its surface like polished soap, and its shape spheroid. Exteriorly it had no smell; its interior had a little of the odour of slightly burnt yolk of egg. There does not appear to have been any foreign body as a point of formation: its fracture exhibits flat needle-like rays of a pale yellow, extending from its centre to within three-fourths of its circumference, and covered with delicate layers of the same configuration as the centre, but of a deep green colour. It melts like a fat substance, but at a much higher temperature than that at which other bezoars have been melted. Its analysis proves it to be wholly composed of *cholesterine* (concreted bile), to which, probably, a small biliary calculus was the nucleus, successive layers of green biliary matter having been subsequently added.—(*Rev. Méd.*)

SECTION II.—INTELLIGENCE RELATING TO THE
MEDICAL SCIENCES.

I. *Memoir upon the Separation of the Umbilical Chord.*

By M. BILLARD.

IN this essay, which is published in les Archives Générales de Médecine for November 1826, M. Billard has entered at some length into the history of the separation of the umbilical chord, both as regards physiology and legal medicine.

The observations from which the memoir was drawn up, were made upon eighty-six infants, of different ages, of both sexes, and apparently enjoying a good state of health.

M. Billard was first struck with the very remarkable difference that exists between the umbilical chords of different infants. Some are voluminous, soft, and may even be termed fat; an appearance

owing to a superabundance of the gelatine of Wharton; others are small, thin, and contain much less of this substance. The first desiccate more slowly than the last. There is a tendency to soften, and they often suppurate, especially at their base. The latter become very soon dry, and transparent as parchment; and when dry, black lines, the remains of the obliterated vessels, are manifest on holding them to the light. The proportion between the thin chords and those which have a greater quantity of gelatine, is one-third for the first, and two-thirds for the second. Before drying, the chords wither, and this withering may be regarded as the first degree of desiccation. The following statement exhibits the different periods at which it commences:—

Of eighty-six infants that were observed, sixteen exhibited the chord a little withered, and even fresh. It was soft, blue, very flexible, filled entirely the knot of the ligature, and the cut surface was still clean. Of these sixteen, one was five hours only from birth, six a day, four two days, and four three days. The withering, therefore, varies in its commencement from five hours to three days from birth. In twenty-four infants, desiccation had begun at the end of the chord, had occupied one-half, or already extended to the abdomen. Seven of these were only one day old, eleven were two days, three were three days, and three were four days, from birth. In some, the chord was large, and very soft at its base, which was surrounded by a thick and prominent cutaneous band. In all, the cut surface of the chord was blackened, shrivelled, and was loose in the ligature. Hence it appears, that desiccation generally begins on the first or second, and yet may have made little progress on the fourth day.

The period of complete desiccation is not less variable. Twenty-five had the chord entirely dry. Five were two days old, nine three days, five five days, four four days, one one day, and one a day and a half, from birth. Three days, therefore, is the period at which desiccation is ordinarily complete; but it may be perfected as early as the first day, or may be retarded to the fifth. But it should be remarked, that in the former case the umbilical chord was very thin.

M. Billard regards the desiccation of the chord as the result of vitality. He states, that the portion of chord connected with the placenta does not undergo the same changes as that part of it which is attached to the child. The former withers, and putrefies as dead matter; but this does not happen with the abdominal portion of the chord. The desiccation of the latter ceases the moment that life is extinct. The one is a true decomposition; the other is merely desiccation without decomposition.

This phenomenon M. Billard does not attempt to explain positively, but is disposed to attribute the desiccation to animal heat, which during the life of the child may favour evaporation; while, on the contrary, the moisture exhaled from the body after death may preserve the softness of the chord, and even favour its decomposition.

M. Billard sums up this part of his paper with the following inferences :—

‘ 1. The desiccation of the umbilical chord takes place during life only.

‘ 2. At the moment of death this desiccation is completely suspended, or considerably diminished.

‘ 3. If the chord is fresh, or commencing to wither, the infant may either have been born dead, or have lived only a short time.

‘ 4. If the chord is either much or completely desiccated, the infant has at least lived one day.’

These inferences will be so much the more accurate, as the examination shall be made nearer to the period of the infant's death.

II. *Observations upon the State of the Brain and Nerves in some kinds of Monstrosities.*

M. TIEDEMAN has particularly directed his attention to the relation that exists between the brain and nerves, and some kinds of defective conformation, for the purpose of discovering how far the one may be influenced by the other. The following are the questions he proposes, which he has attempted to answer by facts :—

‘ When any particular organ is wanting, is any particular part of the nervous system wanting at the same time ?

‘ When organs are multiplied, are the correspondent nerves equally multiplied ; and is the same deficiency manifest in the correspondent parts of the brain and the spinal chord ?

‘ What are the alterations of the nervous system which correspond to the imperfect development of organs ?

‘ Does there exist any peculiar modification of the nervous system, and especially of the brain and spinal chord, which correspond to the anomalies of the animal organisation in general, or to each organ in particular ? If there is such a modification, in what does it consist ?

The author relates observations calculated to throw some degree of light upon these questions.

1. *Congenital Division of the Palate, accompanied with Vicious Conformation of the Brain, and the Absence of the Olfactory Nerves.*—An infant, affected with hare lip and fissure of the palate, died immediately after birth. On the examination of the brain, the hemispheres were united at their anterior part, so that the cerebral convolutions passed without interruption from one side to the other. The olfactory nerves were completely wanting ; and instead of the æthmoid plate, there was an imperforated cartilaginous mass. The optic thalami were united at their superior parts, forming a kind of border to the third ventricle. Two other cases exhibited precisely the same structure ; and similar facts are recorded in the works of Soëmmering and Rudolphi.

2. *Want of Eyes and Optic Nerves.*—M. Tiedeman had seen a dog in whom the eyes were wanting, and whose orbital cavities were filled with cellular substance. On examination, two very soft fila-

ments were found in the place of the optic nerves. They proceeded towards the optic thalami, and the corpora quadrigemina passed round the peduncles of the brain, and terminated without union on the anterior part of the pituitary gland. The other nerves of vision were altogether wanting. Malacarne, Osiander, Lobstein, and other authors, have related similar cases.

3. *Union of the Eyes with Irregular Conformation of the Brain.*—A fœtus at its full time had neither nose nor olfactory apparatus. He had but one eye, which was provided with four pupils. The ocular globe appeared double behind, and had an oblong form before. The hemispheres of the brain were a uniform mass, without a trace of convolutions. The olfactory nerves were entirely deficient, as well as the æthmoidal. The olfactory nerves penetrated the orbit without uniting.

M. Tiedeman has related other observations, from which it seems to be proved that the union of the two eyes is always accompanied by the absence of the organ of smell, of the nasal fossæ, of the æthmoid, vomer, and lachrymal bones. In the majority of these cases there was no mouth; in others the tongue was completely or partially deficient. The hemispheres of the brain were united, so as to form a less voluminous mass than is usual, and without the slightest vestige of convolutions. The corpus callosum does not exist. The olfactory nerves are wanting, when the parts over which they are distributed are wanting. Their absence commonly coincides with a diminution in the size of the corpora striata, and the absence or imperfection of the fornix. The optic nerves generally unite before penetrating the orbit, or sometimes enter it separately; but in no case do they communicate after entering this cavity.

M. Tiedeman infers, that the conformation of the brain and nerves is intimately connected with the development of the correspondent organs; that the nerves do not exist when the organs to which they should be distributed are absent; and that the development of bone is subject to the same law, because it is dependent on the development of the organ.—(*Archives Générales de Médecine*, Decembre 1826.)

III. *Notice of a Peculiar Acid. (Extract of a Paper read to the Académie Royale des Sciences, Nov. 22, 1826.)*

* In passing this year through the department of Vosges, M. Gay-Lussac, accompanied by M. Darcet, visited a manufactory of chemicals situated in the small town of Tan. The proprietor, who prepared tartaric acid in great quantity, for the purposes of commerce, by decomposing the tartrate of lime by sulphuric acid, gave him a quantity of crystallised acid, obtained by chance in the process, differing from the common tartaric acid in its appearance and solubility in water, and which he regarded as tartaric acid mixed with some foreign substance that altered its properties. On his return to Paris, M. Gay-Lussac submitted this sample to examination, and discovered that it contained no foreign base, but

that it had the characters of a peculiar acid. Its actual origin is still unknown.

' This acid is crystallisable ; but the form of the crystals is not yet well determined : it is less soluble in cold water than tartaric acid.

' Its aqueous solution precipitates white flocculi from lime water, in the same way that tartaric acid does ; but the calcareous precipitate re-dissolved by hydrochloric acid re-appears on adding ammonia to the liquid,—while the precipitate caused by tartaric acid, and re-dissolved in hydrochloric acid, is not precipitated by the addition of ammonia.

' This acid has a greater affinity to lime than the hydrochloric and nitric acids ; for it precipitates the hydrochlorate and nitrate with this base, exactly in the same manner as oxalic acid ; but it differs in not rendering turbid a solution of sulphate of lime.

' It forms a salt with potash little soluble in cold water ; it precipitates the acetate of lead, and the precipitate contained a considerable quantity of water in combination,—while the tartrate of lead is free from water : the equivalent number of both acids is very nearly the same.

' Submitted to distillation in a cucurbit, it is decomposed, yielding a yellowish acid liquid, and a coal which burns in the air without any residue.

' M. Gay-Lussac is still engaged in investigating the peculiarities of this acid.'—(*Journal de Chimie Médicale*, Dec. 1826.)

IV. Mortality of Prisons.

' M. VILLERME, in a memoir on this subject, presented at a sitting of the French Institute, places at the head of the causes of the great mortality in prisons, poor and insufficient diet. His observations of course refer to the Parisian prisons. The daily ration of a prisoner is a pound and a half of bread, some economical soup (Count Rumford's), and an unlimited quantity of water. This diet, notwithstanding all the fancies of philosophical people, is not good enough to preserve the human body in a state of health, even among the French. Its uniformity, and the absence of animal food, are considered by M. Villerme to be its chief defects. To this cause, added to the previous habits and privations of those confined, rather than to the insalubrity of the prisons themselves, he ascribes their great mortality ; which, before 1819, was equal to one in twenty-three, but has since been reduced, in Paris, as well as in the provincial prisons, chiefly by the attentions of the Royal Society of Prisons, to one in thirty-three.

' If the dépôt de mendicité of Saint Denis is included in the calculation, the mortality must yet be stated at one in fifteen ; it was equal to one in twelve before the year 1819, when the above society was established. So that M. Villerme is almost justified in saying that prisoners will live or die, just as we choose.'—(*Biblioth. Méd.*)

The amelioration in the state of the prisons of France has been

very gradual. An eloquent sermon, preached by the Abbé Gros de Besplot, drew the attention of Louis XV. to the subject. His benevolent successor instituted the most important plan of classification of the prisoners. In 1801 further improvements took place; and Louis XVIII., during his short reign, established the Royal Society of Prisons. One of the most beneficial measures was the introduction of labour among the prisoners. Independent of the moral effects of this arrangement, it is stated, that at Metz the mortality within the prison was diminished one-half by it.

V. *Monthly Report of Prevalent Diseases.*

‘THE only object we have in view in these Reports is to give an idea of those diseases which are most prevalent. During the past month, however, nothing has occurred which appears worthy of being recorded, except that the fever mentioned on former occasions seems decidedly to have decreased. We are not aware that there exists at present any disease which is especially entitled to be called prevalent, beyond the catarrhal affections and rheumatism which always abound at this season.

‘*January 25th.*

BILLS OF MORTALITY FOR 1826.

DISEASES.

| | | | | | |
|------------------------|------|----------------------|------|-----------------------|--------|
| Abscess | 76 | Fever | 926 | Palsy | 22 |
| Age and Debility | 1575 | Fever, Typhus.... | 97 | Paralytic | 125 |
| Apoplexy | 363 | Fever, Intermittent, | | Pleurisy | 13 |
| Asthma | 922 | or Ague | 2 | Rheumatism | 12 |
| Bedridden | 1 | Flux | 8 | Scrofula | 10 |
| Bile | 14 | Gout | 38 | Small-Pox | 503 |
| Cancer | 100 | Hæmorrhage | 34 | Sore Throat, or Quin- | |
| Childbirth | 209 | Hernia | 28 | sey | 13 |
| Consumption | 5290 | Hooping Cough .. | 674 | Spasm | 44 |
| Contraction of the | | Hydrophobia | 4 | Still-born | 733 |
| Heart | 2 | Inflammation | 2295 | Stone | 21 |
| Convulsions | 2588 | Inflammation of the | | Stoppage in the | |
| Croup | 90 | Liver | 119 | Stomach | 20 |
| Diarrhœa | 12 | Insanity | 170 | Suddenly | 110 |
| Dropsy | 820 | Jaundice | 33 | Teething | 309 |
| Dropsy on the Brain | 676 | Jaw-locked | 1 | Thrush | 65 |
| Dropsy on the Chest | 65 | Measles | 774 | Tumour | 8 |
| Dysentery | 7 | Miscarriage | 3 | Venereal | 8 |
| Enlargement of the | | Mortification | 244 | Worms | 1 |
| Heart | 16 | Ossification of the | | | |
| Epilepsy | 40 | Heart | 6 | Total of Diseases | 20,374 |
| Eruptive Diseases.. | 12 | Palpitation of the | | | |
| Erysipelas | 17 | Heart | 6 | | |

CASUALTIES.

| | | | | | |
|--------------------|-----|---------------------|-----|---------------------|-----|
| Burnt | 28 | Frighted | 1 | Shot | 1 |
| Choked | 1 | Killed by Falls and | | Smothered | 1 |
| Drowned | 139 | several other ac- | | Starved | 2 |
| Excessive Drinking | 7 | cidents | 112 | Suffocated | 8 |
| Executed | 2 | Murdered | 4 | Suicides | 57 |
| Found Dead | 9 | Poisoned | 8 | | |
| Fractured | 2 | Scalded | 2 | Total of Casualties | 384 |

Christened .. Males, 11,178—Females, 11,066—In all, 22,244.
Buried..... Males, 10,454—Females, 10,304—In all, 20,758.

Whereof have died—

| | | | |
|-----------------------------|------|----------------------------|------|
| Under Two Years of Age | 5952 | Sixty and Seventy..... | 1832 |
| Between Two and Five | 1982 | Seventy and Eighty | 1569 |
| Five and Ten..... | 768 | Eighty and Ninety..... | 634 |
| Ten and Twenty | 808 | Ninety and a Hundred | 90 |
| Twenty and Thirty | 1472 | A Hundred | 1 |
| Thirty and Forty | 1724 | A Hundred and Three | 3 |
| Forty and Fifty | 1994 | A Hundred and Five | 3 |
| Fifty and Sixty | 1926 | | |

Decreased in the Burials this year, 268.

There have been executed within the Bills of Mortality, 19; of which number only 2 have been reported as such.

(*Lond. Med. and Phy. Journal for February.*)

VI. Case of Uterine Hæmorrhage successfully treated by the Operation of Transfusion. By BURTON BROWN, Esq.

' MRS. —, ætatis thirty, was delivered of her tenth child on the 31st December, at a quarter before one, P.M. This lady had, in all her preceding labours, suffered much from uterine hæmorrhage; she was of a lax and delicate habit, and hysterical in the highest degree. Soon after the birth of the child, an alarming flooding occurred: the hand was immediately introduced into the uterus, for the purpose of exciting contraction, which effect was almost instantly produced; the womb expelling both the hand and placenta into the vagina; and from this period the hæmorrhage ceased. Although I have seen much of flooding, yet the symptoms of collapse were such in the present instance as to produce in my mind a considerable degree of anxiety and alarm. I administered from time to time small portions of pure brandy, amounting in the whole to eight or ten ounces; in addition to which she took a draught composed of æther and camphor mixture. It should perhaps be stated, that, in addition to the introduction of the hand within the uterine cavity, cold was extensively applied to the abdomen, and the head was lowered. The uterus continued very firmly contracted, except at intervals, when there was a slight relaxation for a few seconds,—not, however, sufficient to allow of the escape of any blood from the uterine vessels. The patient had three smart convulsive fits, each followed by a very alarming collapse. As she appeared to have slightly rallied in consequence of the brandy and æther, I contented myself for a short time with watching her very closely.

' She now vomited, and, as frequently happens in these cases, appeared to be a little roused by it; but her pulse soon flagged again; the breathing became irregular and weaker; and from this time the powers of deglutition were lost. She became now perfectly insensible: the head was thrown back, the eyelids closed, and the pupils fully dilated. The pulsation of the carotid artery was just perceptible, and the radial artery imparted to the finger only a diffused tremor.

' I at this period requested the assistance of Dr. Blundell, who was from home, as was also Mr. Doubleday.* Mr. Waller, of Aldersgate Street, was now sent for, and arrived about half-past two, (an hour and three-quarters after the birth of the child), when the patient was in the following state:—She was lying on her back, with a most death-like expression of countenance; her extremities were of a marble coldness, and there was but little warmth on her chest or abdomen. She had, in a most remarkable degree, the high respiration, which was accompanied with a good deal of stertor. The eyelids were closed, and the eyes perfectly insensible to light; pupils fully dilated. The jaw was dropped. The pulse at the wrist was not to be felt; nor could Mr. W. distinguish the beat of the carotid. It was my firm conviction, at this period, that she would not survive long enough to have the operation of transfusion performed; though, after a deliberate consultation upon the case, we determined to make the attempt, not considering ourselves justified in omitting it, even under the present discouraging circumstances. The operation was proceeded in after the usual manner.

' Twenty-five minutes before three o'clock, (two hours and ten minutes after the birth of the child), thirteen drachms of blood were injected through the median vein, in a direction towards the heart, by means of a syringe; the blood remaining out of the living body, on the whole, about a minute and a half. No particular change seemed to be produced by this first supply of blood, which was injected with the greatest ease, and no unpleasant symptoms followed it. Care was of course taken to prevent the admission of air, and the blood was thrown in very slowly.

' Five minutes having elapsed, the injection of thirteen drachms was repeated, in the same slow and cautious manner; and now the action of the radial artery became decidedly improved: it was no longer a mere tremulous flutter, but a distinct pulsation. The respiration soon became more free. The pupil was still exceedingly dilated, and no signs of sensibility were manifest; the palpebræ were of a mottled hue, and the countenance extremely pallid.

' Ten minutes having elapsed from the second injection, the operation was repeated, and the improvement was now more evident, (the aggregate quantity injected amounting to about five ounces). The pulse was 120, and regular. Mr. Doubleday informed me that, at the time of the third injection, he separated the palpebræ, and passed the point of his finger several times before the cornea, but no sensibility was manifested, either by motion of the globe or contraction of the iris. She, however, moved her extremities, and exclaimed "Oh!" The countenance was less pale; she sighed deeply, and breathed with a more expanded thorax. About three teaspoonsful of brandy were now given her, mixed with a little water, which she swallowed with tolerable ease, being put into her mouth by a spoon.

* 'This gentleman arrived, however, at the termination of the second injection.'

' It was not, however, till after the fourth injection that the amelioration was most conspicuous. Now the pupil contracted readily upon the admission of light; she moved her extremities frequently, and with considerable power; the chest was fully expanded at each inspiration; pulse 120, equable, and moderately forcible. She appeared to have much pain or uneasiness in her left side, evinced by some restlessness, by putting her hand to her side, and including the trunk laterally, as though she would shrink from herself; the corrugatores supercilii forcibly contracted. These indications of the existence of pain were particularly observable when pressure was made on the uterine region. The cheeks became reddened during the contraction of the facial muscles while in pain, and the lips, from the powerful action of the orbicularis criss, were quite florid.—Were these the effect of after-pains? I think she recognised her husband when he spoke to her, and she grasped my hand as though she knew me.

' It was now evident that the threatening symptoms were subdued, but it became a question whether another injection would not tend to alleviate the unpleasant symptoms which so often follow uterine hæmorrhage, even when patients eventually do well; and, consequently, a fifth was attempted; but, owing to the patient's getting a little restless, and some other cross incidents, it was abandoned. When the pressure was removed from the lower part of the vein which had been opened, the blood issued in a small jet; thus proving, beyond controversy, the complete restoration of the circulation.

' She now directed her eyes towards surrounding objects, and attempted to adjust her dress. An hour and ten minutes after the first injection, she noticed all around her; she appeared soothed by the attention of her nurse, and spoke to me with a firm, distinct voice, desiring that I would not leave her. She appeared to have much nervous irritation, or hysterical mobility; to alleviate which, fifty drops of tinct. opii were given. At a quarter to four, she turned upon her side: this was three hours and a half after the birth of the child.

' Half-past six.—Has had no sleep. Great uneasiness and heat of the head. She had taken toast and water, and diluted milk. An evaporating lotion was directed to be frequently applied to the head, and a draught composed of liq. am. acet. and mist. camph., with twenty minims of tr. hyoscyam. to be taken every six hours.

' January 1st, ten P. M.—Had taken light nourishment, such as egg beat up with milk. Half an ounce of castor-oil was given early in the morning, which produced a copious evacuation. In the evening, she complained of intense pain in the head. Pulse equable, and moderately firm; much heat in the head and temples; skin and extremities ordinarily warm. Diet during the day has been chiefly milk, and the yolk of one egg. Respiration free and easy; sensibility perfect; in short, the headach was the only bad symptom.

' 2d, morning.—The castor-oil was repeated, which again produced a plentiful evacuation. The pulse 100, strong and bounding; the surface of the body hot, but the heat and pain in the head

somewhat diminished. Some interrupted sleep was obtained during the night. The mind remains collected and tranquil.

' Afternoon.—Complains of acute pain in the forehead, principally over the left eye, extending down the side of the face, with occasional confusion. In the evening, the pain was less, and in its occurrence not so frequent; temperature of the head lessened, and also that of the skin; pulse 100, equable and compressible.

' 3d, morning.—Passed a restless night; sleep disturbed; considerable pain in the head, with increased temperature; was constantly corrugating the skin of the forehead and eye-brows; had resisted the application of the lotion during the night. Complains of pain in the bowels, for which warm flannels were applied with benefit; and had passed three small, lax motions. Tongue clearer, moist, and rather pale-looking; pulse 100, and strong.—To have six leeches applied to the temples.

' Eight P. M.—Leeches bled well. Pain at the head less; heat reduced; tongue free from the creamy crust with which it was covered last evening, and this morning moist, and looks pale, temperature of the skin natural; pulse 100, soft and compressible. The arm was dressed the first time; looked well; not any tenderness, or indication of inflammation along the course of the vein.—To take thirty drops of laudanum, in one of the draughts at bed-time.

4th, ten A. M.—Was quieted by the opiate, though the sleep was disturbed. Pain in the head less severe, and not so frequent in its attacks. Her hair has been removed, from which she has found benefit. Lotion pleasant to the feel. Pulse 106, and soft; skin generally temperate; lochial discharge in sufficient quantity. Not any indication of lacteal secretion. To take ℥ss. of ol. ricini, not having had stools since yesterday morning. Tongue coated with a brownish coat. Has taken a pint of milk in the twenty-four hours, besides the yolk of one egg, in addition to other diluents.

' Nine P. M.—Had four stools. Tongue as morning; skin temperate; complains of cold generally; recurrence of pain in the head not so frequent.—To take the opiate draught at bed-time.

' 5th, ten A. M.—Had a restless night, from hysterical affection; violent fits of crying; did not sleep till six in the morning. Pain in the head less; tongue coated as before; pulse 106, and soft; moist skin, not much above natural temperature.—Ordered the draughts to be continued, with the addition of twenty minims of spirit. æther to each.

' Evening.—Has complained of cold, and also pain in the right hip, extending down the outer side of the thigh; is very hysterical. Lochial discharge of good quality, and rather copious. Pulse eighty; tongue the same; skin temperate.—To take the opiate at night, and a rhubarb draught in the morning.

' 6th, A. M.—Passed a restless night, apparently more from hysterical affection than any other cause. Other symptoms the same as last evening.—The rhubarb draught ordered to be repeated, the first not having answered.

' Evening.—Pulse seventy; tongue looking moist, and nearly

free from crust; skin temperate; complained of pain extending from the spine of the ileum down the inner part of the right thigh, in the course of the crural nerve. Had passed two plentiful motions. Had used but little of the evaporating lotion, not requiring it.—To continue the draughts.

7th, A.M.—Had rested tolerably well, without the opiate draught, till three o'clock. Passed suddenly a large quantity of fresh-coloured lochial discharge, with some coagula, which alarmed her: she fainted, and, upon recovering, felt numbness in the hands. I was sent for at six o'clock, and found her looking pale, and very restless, with considerable agitation; pulse 120, and small; tongue perfectly clean. Her sensorium was disturbed, and she had refused the application of the lotion to her head, which had been ordered to be applied tepid, since she had complained of the cold. Had taken plentifully of beef-tea. She complained of being much troubled with wind, and was constantly eructating. These symptoms I considered as obviously hysterical.—She was ordered to take thirty drops of laudanum immediately.

7th, eight P.M.—Has passed copiously foetid lochial discharge, with some coagula. Tongue clean and moist; skin cool; pulse eighty and small.—Ordered to take the opiate at bed-time.

From this time there were no particular unpleasant symptoms, except those of an hysterical nature, to which she was constitutionally subject.—(*London Med. and Phys. Journal for February.*)

VII. Vaccination.

THE following remarks by Mr. North upon vaccination, with Dr. Gregory's answer, have appeared in the January and February Numbers of the London Medical and Physical Journal. We gladly insert them here, both from the importance of the subject itself, and from the conviction that Mr. North is correct in his opinions.

“In the performance of this very simple but most important operation, it is at all times highly desirable, and in many cases an object of the first importance, to *ensure* its success.” I am indebted to Dr. Gregory for this sentence, and willingly admit the truth it inculcates. But as I am inclined to believe that some of the remarks which have been made by that gentleman on vaccination are more likely to lead to a *failure* of the operation than to ensure its success, I am induced to state my opinion very briefly upon the subject.

The use of a very sharp lancet is urgently recommended by Dr. Gregory for the performance of vaccination. He observes, “it has frequently occurred to him to notice that a lancet which has been successfully employed in venesection is yet not sufficiently sharp for the purposes of vaccination.” I will not venture to say that Dr. Gregory is singular in this opinion; but I know that most practitioners prefer a lancet with a roundish and rather blunt point. A very sharp lancet is objectionable from the flow of blood it causes, by which the lymph is either washed out of the puncture, or so diluted as frequently to render the operation unsuccessful. An instru-

ment of the former description may be employed, and produce scarcely an appearance of blood.

‘The next point upon which I shall venture to offer a few words appears to me of much importance. Dr. Gregory states, “that the most complete effect both upon the arm and constitution, is made by six or eight punctures, supposing them all to be effectual.” We are directed to make them “in a circular form, and at moderate distances, as thus—

| | | |
|------------------------|-------|-----------------------------------|
| form is, that the true | - - - | The advantage of the circular |
| served.” But I must | - - - | figure of the areola is thus pre- |
| there is no advantage | - - - | be allowed to suggest, that |
| an areola in this man- | - - - | in ensuring the formation of |
| | | ner. It is clear, that from each |

puncture a certain extent of inflammation may arise; and that the united inflammation of “the six or eight” may form an areola, although no single puncture might have produced this appearance. The guide upon which so much stress has been laid is the production of an areola from a *single* puncture, and consequently it is desirable, if several punctures be inserted, that there should be space enough between them to prevent the spread of inflammation from one to the other, that the criterion may not be destroyed.

‘Provided the other directions are complied with, Dr. Gregory is perfectly indifferent “whether little or much blood flows from the wounds.” Here again we are at issue. From my own observation I am induced to believe that, the less the flow of blood, the greater the probability of success; and I am much deceived if this is not the general opinion of the profession. In a copy of Dr. Jenner’s work on Vaccination, I find a manuscript note in the handwriting of Dr. Bateman, from a paper of Dr. G. Fordyce on Variolous Inoculation, which is exactly in point, as it bears with equal force on vaccination. “I apprehend (says Dr. Fordyce) that the *principal*, if not the *only* consideration in inoculation, is the *manner of making the puncture*, which should *penetrate the scarf skin*, so that it may be felt on raising the point of the lancet: *if no blood appears, the better.*” It would be very easy to accumulate evidence in support of this opinion if it were necessary.

‘Dr. Gregory objects to more than six or seven subjects being vaccinated “from even a very tumid eighth-day vesicle.” I believe there can be no impropriety in vaccinating many more, if there should be any scarcity of matter. He also informs us, that “it is obvious that the younger the lymph (fourth or fifth day), the greater is its degree of intensity.” I doubt this fact as applied to the vaccine lymph. If we were to search for analogies from the perfect development and formation of other morbid poisons, we should find many reasons to suppose the dogma of Dr. G. erroneous. That he is also opposed to the general opinion upon this subject may be presumed from the eighth-day vesicle being usually preferred; and upon this point, indeed, Dr. G. appears to be *impar sibi*; for in his recommendations to young vaccinators, he directs them to take lymph “of the sixth, seventh, or eighth day,” when, according to his own doctrine, it is no longer at “its greatest degree of intensity.”

‘ Dr. Gregory states, that the degree of local inflammation and general distress will not be increased by the number of punctures he recommends. In several cases, however, I have seen very severe and unmanageable inflammation, and great general disturbance, from the practice of making numerous punctures. I believe such instances are by no means common; but as troublesome symptoms rarely if ever occur, either locally or generally, from the insertion of two or three punctures made at proper distances from each other; and as no greater degree of security is conferred by increasing that number, I should never adopt the plan recommended, as it exposes the child (particularly if it be of an irritable constitution) to an unnecessary risk. I believe it to be the same with respect to the vaccine as the variolous disease; the latter is as completely produced by one puncture as by many. But to keep up the necessary supply of vaccine lymph, and to render the success of the operation more certain, as one puncture may entirely fail, two or three are usually made. If but one puncture is applied, it ought not to be disturbed.

‘ If the observations on vaccination had proceeded from a less respectable source, I should not have replied to them; but the opinions of Dr. Gregory, particularly upon a subject to which he has devoted so much of his attention, ought not to pass by unnoticed, as they will be considered very safe guides by at least the junior members of the profession.

‘ To offer any apology to Dr. Gregory for having thus unreservedly commented upon his doctrines, would be to imply the unjust suspicion that he is not actuated by that zeal for his profession which must rather approve than deprecate the utmost freedom of discussion amongst all its members.

‘ J. NORTH.

‘ Upper Berkeley Street, Portman Square, Nov. 10, 1826.’

‘ The Editor has received the following Letter from Dr. Gregory:—

‘ *Sir*,—Your last Number contains some critical observations by Mr. North, on the mode of vaccinating which I recommended in a former Number of your Journal. Were I to allow these remarks to pass unnoticed, I might perhaps by some of your readers be considered as tacitly assenting to the correctness of his criticisms. As this is by no means the case, I trust you will favour me by the insertion of a few observations in reply.

‘ Mr. North’s principal objections apply, first, to my statement that the success of the operation is not influenced by the quantity of blood that flows from the incisions; secondly, to my recommendation of a very sharp lancet; thirdly, to my *dogma*, that the vaccine lymph is fully elaborated or developed by the fourth or fifth day, and is even then more intense than on the eighth day; fourthly, to my practice of making six or eight punctures. On each of these heads I have a few remarks to offer.

1. The question whether bleeding from the wounds be or be not indifferent to the success of the operation, may easily be decided by a few comparative trials; but Mr. North has *assumed* as an axiom, that by such bleeding the lymph is either washed away altogether or over diluted. I have yet to learn how these positions are *proved*. The fact that a pretty free flow of blood from the wounds does not always (or necessarily) prevent a successful result, is undeniable. I have witnessed it many times. If it should be ascertained, that, *ceteris paribus*, the greater the bleeding, the less the chance of success, still Mr. North's theory is doubtful; for hitherto it has not been decided how long the virus must remain in contact with the wounded surface to produce its effect,—whether seconds, minutes, or hours.

2. Mr. North states, that “the very sharp lancets which I recommend are objectionable;” and adds, “I will not say that Dr. Gregory is singular in this opinion; but I *know* that most practitioners prefer a lancet with a roundish and rather *blunt* point.” Now, Mr. North has either had experience in the use of very sharp lancets, or he has not. If he has not, how is he enabled to speak so confidently of their injurious tendency; and if he has, what becomes of his *inuendo*, that this practice is peculiar to myself?

3. My “dogma,” that “vaccine lymph is in a state of great perfection and high intensity when first formed,” is not (according to Mr. North) “in accordance with the perfect development and formation of other morbid poisons.” I should be much gratified by learning what are the morbid poisons here specially referred to. I have always been led to believe that the matter of chancre, gonorrhœa, psora, and ophthalmia, is capable of propagating each respective disease from the very moment of its formation. If this opinion is erroneous, I should wish to learn how long after the first appearance of gonorrhœal running a patient may connect himself with women, without endangering their safety?

4. Mr. North objects to making six or eight punctures, having sometimes (though such cases, he allows, are *by no means common*) seen “severe and unmanageable inflammation, and great general disturbance,” arise from such a cause; whereas “troublesome symptoms rarely, *if ever*, occur from the insertion of two or three punctures.” In reply to this, I beg to observe, that local and constitutional disturbance accompanying vaccination appears to me to depend altogether upon the *habit* of the child; and if its system be heated, or predisposed to inflammation, such effects will follow, whether one, two, six, or ten punctures are made. The fault lies, not in the *number* of punctures, but in the period chosen for the performance of the operation. The same child, two months before, or two months after, might have had double the number of insertions made, without any unpleasant consequences, either local or general. Besides, if, with Mr. North, we look to the “development of other morbid poisons,” we shall have still further reason to question the correctness of this criticism. In small-pox the practitioner would find but very little disturbance, either local or general,

though the papulæ scattered over the body, or even collected on the face, were twice, or even three times, eight in number.

‘ I have only further to add, that the mode of vaccination which I recommend is the result of considerable experience at the Small-Pox Hospital, where, during the year 1825, 4003, and in the year 1826, 3006 persons were vaccinated, making a total of 7019 persons who have been under my observation during the short period of two years.

‘ I am, Sir, your very obedient humble servant,

‘ GEORGE GREGORY.’

‘ January 6th, 1827.’

VIII. *Remarkable Spontaneous Cure of Aneurism, with Observations on Obliteration of Arteries.* By WILLIAM DARRACH, M.D. With a Plate.*

‘ THE specimen of morbid anatomy figured in the plate which accompanies this paper, shews a natural and most successful cure of aneurism under the most unfavourable circumstances, and the complete re-establishment of the arterial circulation to the head and right arm, when the innominate and left carotid had become impervious.

‘ In figure 1, *a* represents an aneurism situated at the upper curvature of the aorta; *b*, the under curvature unaffected by the disease; *c*, the left carotid filled with a coagulum, contracted at its origin, and changed into a conical form; *d*, the innominate freed of the exuded or secreted matter covering the surface of the aneurism in which it was embedded, and so flattened that its channel was completely obliterated, the opposite inner surfaces adhering to each other by means of coagulable lymph; *e*, the left subclavian artery; *h, h*, the right subclavian artery and carotid; *g*, the healthy enlargement of the artery at the union of the arteries, *h, h*, continued from the impervious innominate, and supplying its place; *fff*, the origins and inosculations of the enlarged, inferior, thyroid arteries. In figure 2, the new route of the blood is demonstrated by a vertical section of the specimen; *a*, the coagulum made up of numerous strata, which fills the aneurismal sac; *b*, the channel formed by means of the coagulum and the under portion of the aorta; *c*, the subclavian; *d d d*, the channel formed by the inferior thyroids from the left to the right subclavian.’—(*Philadelphia Journal of the Medical and Physical Sciences*, Nov. 1826.)

IX. *Analysis of the Water of the Moira Baths.*

THE following analysis of the water of the Moira baths has been presented to us. We are not acquainted with the author of the analysis; but we know the water to be extremely salt, and we have witnessed its efficacy in a very tedious and painful case of chronic rheumatism, affecting principally the lower extremities.

* The Plate was given in our last Number by mistake.

Contents of one pint :—

| | Grains. |
|---------------------------|---------|
| Muriate of soda - - - | 329.75 |
| Muriate of magnesia - - - | 26.25 |
| Muriate of lime - - - | 21.50 |
| Carbonate of iron - - - | 2.25 |
| Sulphate of lime - - - | 12. |
| Sulphate of soda - - - | 16.25 |
| Carbonate of lime - - - | 5.25 |

Total solid contents in a wine pint - 313.25

From the quantity of muriate of soda contained in this analysis, we have been induced to try a simple solution of this salt in the chronic rheumatism of the lower extremities, and especially where the ancles and soles of the feet have been very tender. In several instances it has certainly been beneficial.—EDITORS.

X. Analysis of Concretions found in a Cyst in the Mesentery of a Bull affected with Tubercular Phthisis. By J. L. LASSAIGNE.

M. DUPUY, Professor in the Veterinary School, transmitted this substance to M. Lassaigue. The latter states, that he took much pains in his analysis, that it might serve for a comparison with analogous concretions found in other animals.

‘The concretions are in the form of small, hard, white grains, united together by mucous envelopes. They are situated between the two layers of the mesentery.

‘As, by previous experiment, I was assured that they were composed of fixed substances, I calcined a certain quantity in a platina crucible, for the purpose of destroying the animal matter that united the particles, and which prevented the action of solvents. I obtained as the result of calcination a grayish ash, which formed one-third of the substance employed. This ash dissolved completely in nitric acid, with a slight effervescence. The solution was colourless. Ammonia added in excess formed a very abundant white gelatinous precipitate, composed of phosphate of lime. The supernatant fluid of this precipitate, mixed with oxalate of ammonia, formed a white powdery precipitate of oxalate of lime.

‘It follows, from these experiments, that the concretions were composed of phosphate of lime, carbonate of lime, and animal matter.’—(*Journal de Chimie*, Nov. 1826.)

XI. Extraordinary Accident.

THE following account is copied from the evidence taken at the coroner’s inquest; and we have added some additional information from the surgeon who examined the child.

‘Hannah Pattison, wife of Joseph Pattison, of Bagshot, in Surry. My husband and I were travelling for work, and the deceased, who was about three years and a quarter old, was with us. Yesterday, about one o’clock in the afternoon, we were all three coming through the entry leading from Slaney-street to Snow-hill.

As we were going along the entry the child caught his foot upon a brick which had broken out, and fell down on his face. I lifted him up, but the child was senseless, and died before we reached Mr. Knowles's, which is only across Snow-hill. The child did not fall down any steps; the child was very healthy from its birth. We came to Birmingham on Saturday.

The mark of

+

HANNAH PATTISON.

'George Beauchamp Knowles, surgeon.—I have this morning opened the deceased, and on examining the throat I found a portion of tobacco pipe two inches long, which had penetrated between the atlas and the basis of the skull, entering the skull through the foramen magnum, and passing nearly an inch into the brain. It passed over the top of the wind-pipe, and wounded a large vessel. It was completely hid until the parts were dissected aback. When the child was brought to me I found a part of a pipe about two inches long in the child's mouth; but I saw no other injury. The mouth bled a little, and being told the child had been playing, I thought the pipe I found occasioned the bleeding.

'G. B. KNOWLES.'

The examination was conducted by dividing the symphysis of the lower jaw, and turning the separate portions backwards towards each side. All the soft parts anterior to the vertebrae were then removed, and not till this had been done, could the direction which the tobacco-pipe had taken, be ascertained. The extent to which it had entered the brain was traced by separating the ligaments that unite the atlas to the skull, and passing the finger by the side of the pipe into the foramen magnum. It is to be regretted, that the brain was not examined. On opening the circular ligament that unites the atlas to the occiput, there was a considerable flow of blood, which induced the belief that the basilar artery was wounded. The examination appears to have been conducted with considerable deliberation and care.—EDITORS.

XII. *Hunterian Society.*

Officers of the Hunterian Society, for the year 1827.—President, Benjamin Travers, esq. F.R.S.; Vice Presidents, B. G. Babington, M.D.; John Hooper, esq.; Francis Ramsbotham, M.D.; Aston Key, esq. For the Oration of 1828, Benjamin Robinson, M.D. Treasurer, B. Robinson, M.D. Secretaries, J. T. Conquest, M.D. F.L.S.; William Cooke, esq. Council: W. D. Cordell, esq.; Thomas Davies, M.D.; J. C. Knight, esq.; Charles Law, esq.; John Lake, esq.; James Luke, esq.; J. Miles, esq.; J. Roberts, esq.; James Saner, esq.; Charles Waller, esq.; Thomas Wheelwright, esq.; J. Winstone, esq.

Meetings of the Hunterian Society, held at No. 18, Alderman-bury.—1827. February 21; March 7 (C), 21; April 4 (C), 18; May 2 (C), 16, 30; June 13 (C), 27; October 3 (C), 17, 31; November 14 (C), 28; December 12 (C), 26. 1828. January 9

(C), 23; February 6, Annual Election (C); February 7, Anniversary Dinner. The chair is taken at eight o'clock precisely. C. Meetings of Council, when the chair is taken at half-past seven o'clock precisely.

Clinical Report of the most prevalent Diseases during the preceding Month.

THE greater part of February has been very cold, and frost has continued through almost the whole of the month.

The common pulmonary disorders have prevailed through this time, but without any unusual symptoms. In some instances effusion has taken place, sometimes generally, and taking the form of anasarca; and at others, exhibiting all the phenomena of hydrothorax. Bleeding in such cases has been very useful; but neither this alone, nor combined with purgatives, have sufficed to cure the disease. Diuretics and mercury, united with a mild aperient, have been very serviceable, both with and without depletion.

Several instances of croup have fallen under our notice; with one exception, they have all recovered. The plan of treatment was local depletion, with three-grain doses of calomel every two or three hours. In the patient who died, this complaint had endured for three days before any assistance had been procured.

Fever has been much less prevalent, neither have the cases been so severe. The lungs, however, have been the organs principally affected; and in many instances there was no manifest irritation in the intestinal canal.

The observation made in our last Report, respecting the prevalence of apoplectic and paralytic attacks, has been much corroborated by the experience of the past month. Several fresh cases have fallen within our notice, and we have heard of many others.

We have one case of partial paralysis at this time under treatment, which came on with somewhat unusual symptoms. The patient, a girl nineteen years of age, was suddenly attacked with severe pain in the right arm and shoulder, which continued for nearly three hours. The pain then ceased, leaving the arm completely paralytic. The paralysis is entirely confined to this extremity, and is unattended by any constitutional symptoms. It is perfectly insensible. Three weeks have elapsed since the attack; but there has been no further improvement than a very slight return of sensibility in the shoulder and upper part of the arm. Her health is very good, and the catamenia natural.

One very characteristic example of dyspeptic phthisis has been presented to us during the last month. The individual was twenty-two years of age, and a plater by trade. He had dyspnoea, cough, and expectoration, with pain in the situation marked out by Dr. Philip as being occupied by the duodenum, and the usual symptoms of indigestion. The pain was very greatly aggravated by pressure. He has nearly recovered, by attention to the complaints of the stomach and bowels, without any medicines peculiarly directed to the pulmonary disorder. Leeches were applied to the tender part.

The cases of dyspepsia have been attended by great oppression of spirits in very many instances. This symptom was manifestly owing in some cases to the commercial difficulties of the period.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. Observations on the Surgical Pathology of the *Larynx and Trachea*; chiefly with a view to illustrate the Affections of those Organs, which may require the Operation of Bronchotomy; including Remarks on Croup, Cynanche Laryngæa, Foreign Bodies in the Windpipe, Wounds, &c. &c. 8vo. Pp. 283. Edinburgh, 1826.

2. An Introductory Lecture to a Course of Surgery, delivered at the Richmond School of Medicine in Dublin, on January 8th, 1827. By Richard Carmichael, Esq. Pp. 51. London, 1827.

3. No. II. of Medical Botany.

The second Number is superior to the first. We are pleased to find that the publication has met with encouragement. It certainly deserves it.

Quarterly Report of Prices of SUBSTANCES employed in PHARMACY.

| | s. | d. | | s. | d. |
|--|--------|------|-----------------------------------|--------------|------|
| Acacie Gummi elect. | lb | 3 4 | Coccus (Coccinella) | unc. | 2 4 |
| Acidum Citricum | 90 3 | | Colocyntidis Pulpa Turk. | lb. | 5 0 |
| Benzoinum | unc. | 3 0 | Copaiba | 6 0 | |
| Sulphuricum | P. lb. | 0 6 | Colchici Radix (sic.) | 2 0 | |
| Muriaticum | 0 9 | | Croci stigmata | unc. | 2 0 |
| Nitricum | 2 6 | | Cupri sulphas | lb. | 1 0 |
| Aceticum Dilut. | cong. | 4 6 | Cuprum ammoniatum | 3 0 | |
| Tartaricum | lb. | 4 6 | Cuspariæ Cortex | 3 0 | |
| Alcohol | M. lb. | 3 6 | Confectio aromatica | 5 0 | |
| Æther sulphuricus | 7 0 | | Aurantiorum | 2 0 | |
| rectificatus | 9 0 | | Cassie | lb | 6 0 |
| Aloes spicatæ extractum | lb. | 10 6 | Opil. | 6 0 | |
| vulgaris extractum | 8 0 | | Piperis Nigri | lb. | 3 0 |
| Althææ Radix | 1 2 | | Rosæ caninæ | 1 8 | |
| Alumen | 0 6 | | Rosæ gallicæ | 2 3 | |
| Ammonie Murias | 1 8 | | Rutæ | unc. | 3 6 |
| Subcarbonas | 2 0 | | Scammoniæ | unc. | 2 6 |
| Amygdalæ dulces | 3 6 | | Sennæ | 3 3 | |
| Ammoniacum (Gutt.) | 7 0 | | Emplastrum Ammon. c. Hydrar. | lb. | 6 6 |
| (Lump.) | 3 6 | | Cantharidis | 6 6 | |
| Anthemidis Flores | 3 0 | | Hydragryi | 3 3 | |
| Antimonii oxydum Ver. | 6 3 | | Opil. | 3 6 | |
| sulphuretum præp. | 3 6 | | Resinæ | 1 8 | |
| sulphuretum præc. | unc. | 0 6 | Saponis | 1 8 | |
| Antimonium Tartarizatum | 3 4 | | Extractum Aconiti | unc. | 3 10 |
| Arsenicum Alb. Sublim. | lb. | 2 6 | Anthemidis | lb. | 8 0 |
| Asafoetidæ Gummi-resina | lb. | 4 0 | Belladonnæ | unc. | 1 6 |
| Aurantii Cortex | 2 0 | | Cinchonæ | 3 3 | |
| Argenti Nitras | unc. | 5 9 | Cinchonæ resinosa | 4 6 | |
| Balsamum Peruvianum | lb. | 15 3 | Colocyntidis | 4 6 | |
| Tolutanum | 30 0 | | Colocyntidis comp. | 1 9 | |
| Benzoinum elect. | 8 6 | | Conil | 6 0 | |
| Blamuthi Subnitras | unc. | 1 0 | Elatæris | 35 3 | |
| Calamina preparata | 0 6 | | Gentianæ | 3 4 | |
| Calciæ Murias | unc. | 0 3 | Glycyrrhizæ | lb. | 7 3 |
| Muriatis solutio | lb. | 1 3 | Hæmatoxyli | unc. | 3 5 |
| Calumbæ | lb. | 5 6 | Humuli | 1 6 | |
| Cambogia | 7 6 | | Hyoscyami | 1 3 | |
| Camphora | 4 9 | | Jalapæ | Is. Gd. Res. | 3 3 |
| Canellæ Cortex elect. | 2 6 | | Lactucæ Sativæ | unc. | 1 3 |
| Cantharis | lb. | 12 3 | Virose | unc. | 1 3 |
| Cardamomi Semina | lb. | 10 0 | Opil. | 4 6 | |
| Cascarillæ Cortex elect. | 1 6 | | Papaveris | 7 0 | |
| Castoreum | unc. | 3 3 | Rhei | 2 3 | |
| Castor Rum | os. | 15 3 | Sarsaparillæ | 2 3 | |
| Catechu Extractum | lb. | 1 9 | Stramonii Sem. | unc. | 4 3 |
| Cetaceum | 3 0 | | Taraxaci | 3 6 | |
| Cera alba | 3 4 | | Ferri subcarbonas præcip. | lb. | 3 4 |
| flava | 3 3 | | sulphas | 1 0 | |
| Cinchonæ cordifoliæ Cortex (yellow) .. | 10 6 | | Ferrum ammoniatum | 3 3 | |
| lanceifoliæ Cortex (quilled) .. | 4 0 | | tartarizatum | 3 9 | |
| oblongifoliæ Cortex (red) .. | 9 0 | | Galbani Gummi-resina | 7 6 | |
| Cinnamomi Cortex | 14 3 | | Gentianæ Radix elect. | 1 3 | |

Quarterly Report of Prices of Substances in Pharmacy. 279

| | s. | d. | | s. | d. |
|---------------------------------|-------------|------|------------------------------------|--------|-----|
| Gualaci resina | 7 | 6 | Potasse Subcarbonas | 1 | 4 |
| Hydragryrum purificatum | 4 | 3 | — Sulphas | 1 | 6 |
| — precipitatum album | 8 | 3 | — Sulphuretum | 3 | 9 |
| — cum creta | 3 | 3 | — Supersulphas | 2 | 4 |
| Hydragryri Oxymurias | unc. | 0 9 | — Tartras | 2 | 4 |
| — Submurias | P. lb. | 6 6 | — Supertartras | 1 | 3 |
| — Nitrico-Oxydum | 0 | 6 | Pilule Hydragryri | unc. | 0 4 |
| — Oxydum Cinereum | 1 | 8 | Pulvis Antimonialis | 0 | 4 |
| — Oxydum rubrum | 4 | 0 | — Cinnamomi compos. | unc. | 1 6 |
| — Sulphuretum nigrum | 0 | 6 | — Contrayerva comp. | 0 | 4 |
| — — rubrum | 0 | 4 | — Ipecacuanhæ compos. | unc. | 0 9 |
| Hellebori nigri Radix | lb. | 2 6 | — Scammonie compos. | unc. | 3 8 |
| Ipecacuanhæ Radix | 16 | 6 | — Tragacanthæ comp. | 0 | 8 |
| — Pulvis | 19 | 3 | Resina Flava | lb. | 0 6 |
| Jalapæ Radix | 6 | 3 | Rhei Radix (Russia) | 28 | 4 |
| — Pulvis | 7 | 3 | — (East India) opt. | 13 | 6 |
| Kino | 7 | 3 | Rose petala | 10 | 9 |
| Liquor Plumbi subacetatis | P. lb. | 0 8 | Sapo (Spanish) | 2 | 6 |
| — Ammonie | 1 0 2 | 6 | Sarsaparille Radix (Jam.) | 6 | 3 |
| — Arsenicalis | 1 | 3 | Scammonie Gummi-Resina | unc. | 4 0 |
| — Potassæ | 1 | 0 | Scille Radix siccata | lb. | 1 6 |
| Linimentum Æruginis | lb. | 3 0 | Senegæ Radix | 3 | 6 |
| — Camphoræ comp. | 5 | 6 | Sennæ Folia | 5 | 0 |
| — Saponis comp. | 4 | 3 | Serpentariæ Radix | 4 | 9 |
| Lichen | 2 | 6 | Simaroubæ Cortex | 3 | 6 |
| Magnesia | 7 | 3 | Sodæ subboras | 2 | 6 |
| Magnesie Subcarbonas | 2 | 6 | — Sulphas | 0 | 3 |
| — Sulphas | 0 | 4 | — Carbonas | 3 | 9 |
| Manna | 7 | 0 | — Subcarbonas | 1 | 0 |
| — communis | 4 | 0 | — exsiccata | 3 | 3 |
| Moschus pod. (32s.) | in gr. unc. | 46 3 | Soda tartarizata | 2 | 3 |
| Mastiche | lb. | 8 3 | Spongia usta | unc. | 1 6 |
| Myristicæ Nuclei | 14 | 6 | Spiritus Ammonie | M. lb. | 4 6 |
| Myrrha | 7 | 3 | — aromaticus | 4 | 6 |
| Olibanum | 3 | 3 | — foetidus | 4 | 3 |
| Opopanax gummi resina | 20 | 3 | — succinatus | 4 | 3 |
| Opium (Turkey) | 32 | 3 | — Cinnamomi | 3 | 6 |
| Oleum Æthereum | oz. | 2 3 | — Colchici Ammon. | unc. | 0 9 |
| — Amygdalarum | lb. | 3 6 | — Lavandulæ | lb. | 5 3 |
| — Anisi | unc. | 1 8 | — Myristicæ | 3 | 3 |
| — Anthemidis | 6 | 3 | — Pimentæ | 3 | 3 |
| — Cassiæ | 3 | 9 | — Rosmarini | 4 | 3 |
| — Caryophylli | 4 | 6 | — Ætheris Aromaticus | 9 | 3 |
| — Cajuputi | 3 | 0 | — Nitrici | 3 | 6 |
| — Carui | 1 | 6 | — Sulphurici | 6 | 3 |
| — Juniperi Ang. | 6 | 3 | — Compositus | 6 | 3 |
| — Lavandulæ | 2 | 6 | — Vini rectificatus | 26 | 9 |
| — Lini | cong. | 4 3 | Syrupus Papaveris | lb. | 1 3 |
| — Menthæ piperitæ | unc. | 3 0 | — Sarsaparillæ | lb. | 9 3 |
| — Menthæ viridis Ang. | 4 | 6 | — Tolutani | lb. | 2 9 |
| — Origanî | unc. | 1 3 | Sulphur Sublimatum | 0 | 6 |
| — Pimentæ | unc. | 5 6 | — Lotum | 1 | 6 |
| — Pulegi | unc. | 4 6 | — Precipitatum | 1 | 5 |
| — Ricini optim. | 3 | 6 | Tamarindi Pulpa opt. | 2 | 6 |
| — Rosmarini | unc. | 3 9 | Terebinthina Vulgaris | 0 | 16 |
| — Succini | 3 | 6 | — Canadensis | 6 | 6 |
| — Sulphuratum | P. lb. | 1 2 | — Chia | 10 | 3 |
| — Terebinthinæ | 1 | 4 | Tinct. Ferri muriatis | 4 | 3 |
| — — rectificatum | 2 | 3 | Tragacantha Gummi | 8 | 3 |
| Olivæ Oleum | P. lb. | 2 0 | — Valerianæ Radix | 1 | 3 |
| — secundum | 1 | 6 | Veratri Radix | 1 | 10 |
| Papaveris Capsulæ | (per 100) | 2 9 | Vinum Colchici | 4 | 3 |
| Pix Abietina | lb. | 1 3 | — Ipecacuanhæ | 4 | 0 |
| Plumbi Acetas | 1 | 6 | — Opi | 8 | 0 |
| — Subcarbonas | lb. | 3 8 | Unguentum Hydragryri fortius | 3 | 0 |
| — Oxydum semi-vitreum | 3 | 8 | — — Nitratî | 5 | 8 |
| Potassa Fusa | unc. | 3 6 | — — Nitrico-oxydi. | 4 | 3 |
| — cum Calce | 3 | 2 | Uvæ Ursi Folia | 3 | 4 |
| Potassæ Nitras | 0 | 6 | Zinci Oxydum | 5 | 3 |
| — Acetas | 7 | 3 | — Sulphas purif. | 1 | 3 |
| — Carbonas | 2 | 6 | Zingiberis Radix opt. | 4 | 3 |

NEW REMEDIES.

| | s. | d. | | s. | d. |
|-------------------------|---------|---------|--|----------|---------|
| Brucine | dr. | 28 3 | Morphine Acetate Liquor .. | oz. 18s. | dr. 2 3 |
| Emetine du Codex | dr. | 26 3 | Hydrocyan. Acid (Scheele's), twice the | | |
| Hydriod. Potass. | oz. 5s. | dr. 1 0 | strength of Vauquelin's oz. 3s. 8d. | dr. | 0 6 |
| Iodine | oz. 5s. | dr. 1 0 | Quinine Sulphate | oz. 3s. | dr. 4 0 |
| — Tincture | oz. | 0 10 | Strychnine | dr. | 26 3 |
| Morphine Crystall. | dr. | 21 3 | Veratrine | dr. | 30 3 |
| — Acetate | dr. | 20 3 | | | |

Furnished by Messrs. G. and J. WAUGH, Chemists and Druggists,
Regent Street.

THE METEOROLOGICAL JOURNAL,

From the 20th of JANUARY, 1826, to the 19th of FEBRUARY, 1827.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50 High Holborn.

| January. | Moons. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|----------|--------|-------------|--------|------|------|--------|---------|------------------|---------|--------|---------|------------------|--------|---------|
| | | | 9 A.M. | Max. | Min. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 2 P.M. | 10 P.M. |
| 20 | ☾ | | 28 | 34 | 25 | 30 | 08 | 29 | 90 | 96 | 86 | E | E | Fair |
| 21 | | | 27 | 28 | 26 | 29 | 72 | 29 | 57 | 84 | 95 | NE | N | Snow |
| 22 | | | 29 | 29 | 21 | 29 | 45 | 29 | 52 | 95 | 85 | E | NNE | Fair |
| 23 | | | 28 | 30 | 28 | 29 | 52 | 29 | 41 | 90 | 93 | NNW | W | Fine |
| 24 | | | 30 | 33 | 28 | 29 | 46 | 29 | 52 | 90 | 93 | WSW | SW | Clo. |
| 25 | | | 31 | 31 | 18 | 29 | 52 | 29 | 58 | 93 | 93 | E | ENE | Foggy |
| 26 | | | 28 | 33 | 30 | 29 | 58 | 29 | 68 | 93 | 88 | W | N | s. Sn. |
| 27 | ● | | 33 | 34 | 25 | 30 | 03 | 30 | 15 | 81 | 89 | NNE | NNE | Fair |
| 28 | | | 33 | 42 | 42 | 30 | 05 | 29 | 84 | 87 | 96 | SW | SW | Fair |
| 29 | | | 44 | 46 | 35 | 29 | 79 | 29 | 75 | 98 | 90 | SW | W | Cloudy |
| 30 | | | 39 | 41 | 39 | 29 | 67 | 29 | 63 | 90 | 88 | SSW | SW | Clo. |
| 31 | | | 42 | 46 | 42 | 29 | 61 | 29 | 62 | 98 | 98 | SSW | SSW | s. Rain |
| 1 | | | 43 | 44 | 35 | 29 | 64 | 29 | 67 | 96 | 96 | SSW | NNE | Cloudy |
| 2 | | | 36 | 42 | 29 | 29 | 81 | 29 | 96 | 81 | 85 | ENE | N | s. Rn. |
| 3 | ☾ | | 32 | 34 | 27 | 30 | 30 | 30 | 40 | 75 | 70 | NE | NE | Fine |
| 4 | | | 36 | 38 | 34 | 30 | 41 | 30 | 40 | 79 | 81 | NE v. | NNE | Fair |
| 5 | | | 36 | 38 | 28 | 30 | 36 | 30 | 27 | 83 | 84 | ENE | ENE | Fair |
| 6 | | | 33 | 41 | 34 | 30 | 16 | 30 | 21 | 93 | 90 | NNE | NNE | s. Rain |
| 7 | | | 37 | 41 | 30 | 30 | 29 | 30 | 31 | 90 | 85 | NE | NNE | Fair |
| 8 | | | 35 | 37 | 29 | 30 | 34 | 30 | 35 | 78 | 80 | E | NE | Fine |
| 9 | | | 32 | 36 | 28 | 30 | 24 | 30 | 18 | 77 | 75 | ENE | NE | Clo. |
| 10 | | | 34 | 37 | 30 | 29 | 97 | 29 | 93 | 82 | 87 | NE | NE | Clo. |
| 11 | ○ | | 31 | 33 | 31 | 29 | 72 | 29 | 69 | 86 | 86 | ENE | ENE | Cloudy |
| 12 | | | 36 | 39 | 33 | 29 | 74 | 29 | 87 | 92 | 84 | NE | NW | Sleet |
| 13 | | | 35 | 38 | 28 | 30 | 00 | 30 | 17 | 82 | 80 | NNW | NW | Cloudy |
| 14 | | | 34 | 40 | 34 | 29 | 94 | 29 | 85 | 82 | 82 | WSW | WNW | Sleet |
| 15 | | | 36 | 38 | 24 | 29 | 89 | 29 | 92 | 87 | 85 | NNE | NNE | Fair |
| 16 | | | 25 | 31 | 20 | 30 | 02 | 29 | 96 | 82 | 80 | ESE | WNW | Fair |
| 17 | | | 22 | 30 | 19 | 29 | 83 | 29 | 87 | 85 | 83 | WSW | SW | Fog. |
| 18 | | | 26 | 30 | 24 | 29 | 94 | 29 | 93 | 82 | 82 | E | ENE v. | Fine |
| 19 | | | 26 | 28 | 24 | 29 | 81 | 29 | 66 | 82 | 81 | ENE | ENE | Fine |

NOTICES TO CORRESPONDENTS.

We present our best thanks to Mr. Cooke for the Report of the Hunterian Society.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

. Communications, and Works for Review, are requested to be addressed (post paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 160.

APRIL 1, 1827.

VOL. XXVII.

No. XXII.—NEW SERIES.—VOL. IV.

PART I. REVIEW.

I.

MENTAL DISORDERS.

Observations on the Causes, Symptoms, and Treatment of Derangement of the Mind, founded on extensive Moral and Medical Practice in the Treatment of Lunatics. By PAUL SLADE KNIGHT, M.D., formerly a Principal Surgeon in the Royal Navy, many Years Surgeon of the Lunatic Asylum for the County of Lancaster, &c. &c. *Together with the Particulars of the Sensations and Ideas of a Gentleman during his Mental Alienation, written by himself during his Convalescence.* 8vo. Pp. viii.—167. London, 1826.

Outlines of Lectures on Mental Diseases. By ALEXANDER MORISON, M.D., of the Royal Colleges of Physicians of London and Edinburgh, Physician in Ordinary to his Royal Highness the Duke of York, Physician Extraordinary to his Royal Highness Prince Leopold, Inspecting Physician of the Surrey Lunatic Houses, &c. &c. Second edition; with Thirteen Engravings. 8vo. Pp. 148. London, 1826.

Des Causes Morales et Physiques des Maladies Mentales, et de quelques autres Affections Nerveuses, telles que l'Hystérie, la Nymphomanie, et le Satyriasis. Par F. VOISIN, Docteur en Médecine de la Faculté de Paris, &c. 8vo. Pp. xvi.—415. A Paris, 1826.

Of the Moral and Physical Causes of Mental Disorders, and of some other Nervous Affections, as Hysteria, Nymphomania, and Satyriasis. By F. VOISIN, M.D., of the Faculty of Paris, &c. 8vo. Pp. xvi.—415. Paris, 1826.

THE subject of mental disorders was so lately brought before our readers,* that nothing but an unwillingness to pass over,

* In the January Number.

apparently without notice, the two English works placed at the head of the above list, would have induced us so early to return to it. In the article to which we have just referred, we expressed an opinion, that, in the present state of our investigations into diseases of the mind and their physical causes, nothing was so much to be desired as facts, recorded with a scrupulous adherence to truth; and it is in the hope of meeting with these that we open the works now before us.

Dr. Paul Slade Knight states, that he was for many years surgeon to the Lancaster Lunatic Asylum, and that his work is the result of very extensive experience; and contains observations, founded on the records of medical practice in the Asylum, to which records, carefully kept by himself, he can only refer, having been, it would appear, refused permission to see them for the purpose of making extracts. We do not quite comprehend this. If the *official* information given to Dr. Knight of his cases being 'classified among the *public* records of that institution' was, by some new species of logic, meant to excuse their being kept *private*, even from him who drew them up, we do not see what argument could be employed by his readers potent enough to put aside so truly official an obstacle to obtaining any reference to them.

Among the numerous definitions of insanity which we have read, either in British or foreign authors, we have never yet happened to meet with one which was not so imperfect as to include states of mind which we could not be at all warranted in regarding as insane. Dr. Knight's attempt at a definition is, we think, of little more value than the rest,—as, if we understand it, it implies that insanity is confusion of intellect; and there are many individuals of confused intellect who are by no means insane. Physicians seem to be incapacitated from giving a correct definition of morbid affections of the mind, by their general ignorance of the philosophy of mind in a sound state; and of those who have paid more attention to metaphysics, few seem to have been familiar with insanity. It is questionable, whether all the forms of madness can be included in any brief definition; but at least, if it be possible, it can only be done by a very careful consideration of the varieties of lunacy. The general fault has been to seize on one strong symptom, not of constant occurrence, and to apply it to all varieties: indeed nothing can be more obscure, or, generally speaking, more incorrect, than the language employed by authors on this subject. Thus, in Dr. Knight's book, we have at page 9 the case of a gentleman who 'would talk rationally, intelligently, and even eloquently, for a few minutes; but if suffered to proceed, his

ideas acquired, as it were, a geometrical progression, and he would excite astonishment by the rapidity of his utterance, vivid conception, preposterous distortion of facts, and wild and erroneous conclusions :’ and this case the author entitles, ‘Error in Conception and Memory.’ What meaning is here assigned to the word conception, we cannot imagine ; or why an error of memory should be charged to the individual in question : to us the case appears to present an instance of a morbidly active imagination, or too rapid an association of ideas. We could point out many instances of equal inaccuracy. Errors of this kind are not merely speculative,—for if there be any reasonable hope of advantage from the management of the mind in lunatics, that hope can never be realised, or the management of the mind skilful, so long as the condition of the mind in lunacy is not clearly understood.

With respect to the causes of insanity, Dr. Knight is of opinion, that too much stress has been laid on the passions ; or rather, that the violent passions were but the commencement of insanity in cases in which they have been looked upon as causes. This is perhaps the case in many examples ; but we every day see men abandoning themselves without reserve to the most impetuous passions, pursuing for a year objects of gratification, which in another year they wholly disregard, and yet not becoming insane. In those who do become insane when exposed to such vehement feelings, there is therefore possibly, for the most part, some original imperfection in the organ of thought, which prevents the individual from falling into moral excesses with impunity to his understanding. The mere excess and absurdity of passion is indulged in continually without insanity being the consequence. As to whether, in any cases, even those in which some sudden and vehement affection has seemed to cause madness, there is really an intervening circumstance of bodily change,—for instance in some part of the fine structure of the brain,—may be supposed, and is not impossible, but hardly admits of proof ; and, as for more manifest bodily disorder attendant on insanity, its presence must not always be considered as indicative of a satisfactory cause of the mental disturbance. Those who most strongly contend for the dependence of mental derangement in every instance on bodily disorder, must find many instances in which all discoverable bodily disorder will yield to proper treatment, the mental affection remaining stationary ; and if they find no difficulty in supposing, that in such a case the brain itself has undergone some morbid change in consequence of mere functional disorder of some remote organ, we do not see what objection they can have to concede the possibility, in any

case, of cerebral disorder and madness being the direct result of a violent affection of the mind—that is, of functional disorder of the brain itself. The separation of the office of the intellectual part of the nervous system from that of the portions of it which influence bodily actions, is surely not yet so complete, or so precisely marked out, as to justify very positive assertions concerning the causes of insanity. The subject requires to be approached with more caution, and perhaps with more humility, than has yet characterised those who have engaged in it: and whenever it is so approached, we shall see the clouds of error, in which it is without question yet involved, gradually cleared away; and the improvement of practice in mental disorders, great as it has been in the last century, will in all probability be still more strikingly promoted in another. At present, we have the most positive and the most opposite opinions in different authors: some denying the possibility of madness arising from any but bodily causes,—others denying that the cause of insanity can ever be corporeal; some insisting upon it that the brain is not affected in any case,—others, that it is always diseased. We would put aside all evasion concerning the immateriality and consequent freedom from disease possessed by the mind itself, freely admitting those points as matters beyond dispute. The question is, are its diseased manifestations always dependent on disease of remote organs of the body, or on disease of the brain itself? or may the functions of the brain be disturbed, interrupted, imperfectly performed, without actual disease of the brain? If the latter point is denied, the question is at end; but in that case we conceive an unjustifiable exception would be made in the instance of the brain from what takes place in other organs. If it is granted, then insanity may be produced without corporeal disease. Corporeal disease may be simultaneously produced: the same shock, the same excitement or depression, which interferes with the just performance of the undescribed functions by which thought is elaborated, may impair digestion, may disturb the actions of the liver or intestines, and these secondary affections may react on the mind, and aggravate its confusion and distress: but they are not in these instances to be considered as the fountain and origin of the mental malady; nor can they be so considered with any propriety, except in cases where they undoubtedly were known to have preceded the impairment of intellect, without any decided mental primary cause having existed.

Saying no more of Dr. Knight's metaphysics or pathology, although we certainly do not find much agreement between his opinions and those which we have ourselves formed after

no inattentive observation of the maladies in question, we pass on to his practice. With respect to bleeding, even in the high state of mania, he agrees to what has been laid down by several practical authors of eminence, and particularly by the very judicious Dr. Hallaran, of Cork, considering bleeding, except when there is much excitement, as a very questionable remedy, on account of the great tendency of these cases to change their type and form, and to pass into the low state. The practitioner, in cases of this kind, is placed in a situation of some perplexity. Authorities of nearly equal credit are found to condemn bleeding, and to extol it as the only thing to be depended upon. This is but another instance of the indiscriminate notions entertained on all parts of this subject. That many cases of mania commence with a very slight degree of excitement, and that such excitement is often very transient, every practitioner must have observed: here, copious venesection would be injurious. That in other cases there is a very high excitement, a state approaching to phrenitis, is equally well known: here, it would seem that bleeding should be resorted to boldly, and certainly in the cases detailed by M. Bayle in the work reviewed in our January Number, this treatment was plainly indicated, and was the only treatment followed by recovery. There is, however, so much doubt expressed by many of the best writers on insanity concerning the propriety of these bold measures in any case, that we can only take upon ourselves to recommend a cautious consideration of the circumstances of each. Where there is no reason to suspect that the complaint has an inflammatory character, some part of the relief attempted may perhaps always be most safely trusted to the auxiliaries of bleeding. With this view, sedatives have been often employed, and with the greatest benefit. Dr. Knight speaks highly of digitalis, and inserts a case in which, given in doses of from twenty-five to sixty minims, three times a day, it produced a decided cure in a maniac who was very violent, noisy, and talkative, and had been some time insane. He further says:

‘I have in a great number of instances been under the necessity of giving digitalis for two or three months successively; generally in small doses of *ʒ* v. to *ʒ* viij. *ter de die*.’ This has kept the pulse steady, and the patients have been enabled to enjoy amusements, exercise, or labour, and to mingle peaceably with the other

* We cannot allow Dr. Knight’s *Latin* to pass without comment. *Ter de die*, we suppose is meant to express three times of the day. In the recital of the case, and in the *first* report, he says *pergat*, which we suppose to mean, ‘Let the patient be purged;’ for other meaning it can have none.

patients. I have repeatedly omitted the medicine, and as certainly the insubordinate disposition, and restlessness, and a slight acceleration of the pulse, have followed. On resuming the medicine, the patient has peaceably and cheerfully returned to his usual avocations—generally labour; and under this treatment has been very much improved in health, and ultimately restored to sanity. I am desirous to direct the particular attention of my reader to these facts, because I know some, and among them a distinguished physiologist, whose private instruction it was my good fortune to receive, imagine that digitalis allays excitement only by impairing the vital energy.

‘The two Misses L—— laboured under melancholia religiosa, with a quick pulse. After attending to the state of the stomach and bowels, I put them on a course of digitalis, *and they improved as the pulse was reduced*, became more manageable; and by the powerful aid of a moral treatment, which I believe was judiciously planned, and faithfully carried into execution, both these patients recovered, though they had long, I think some years, been considered in a hopeless state.’—P. 52.

There seems to be a general objection to opium in cases of insanity. We have suspected this to arise from an unwillingness to employ it with the freedom required. Of the great advantage of hyoscyamus and camphor, particularly in cases of melancholia, with want of sleep, we can speak from many trials, although we have never found it requisite to give so much as half a drachm, or twenty grains, which seem to be the usual doses prescribed by Dr. Knight. The following observations occur under the head of *Alteratives*, and contain some useful practical hints, of which the efficacy is perhaps a little impeded by the peculiar manner in which the author expresses himself.

‘As the “*pilulæ hydrargyri*” has been by some denounced as an improper medicine in the cure of the insane, I beg to state, that, in a very great number of instances in which I have used it in old cases (for I never have thought it a proper medicine for any recent case), I have never once witnessed a bad effect; but, on the contrary, there is not a solitary instance where the medicine has not been of some benefit, and many cases where the recovery was chiefly, if not wholly, attributable to it. I have generally conjoined with it either the carbonate of soda, digitalis, or columbo, according as the corporeal ailments seemed to require these remedial means. I am not, however, a devotee to mercury. I should apprehend mischief from its use in most, perhaps in all *recent* cases, attended with excitement, except as an ingredient in an active purgative. I have thus briefly endeavoured to set upon these medicines, *what my experience leads me to consider their just value in the medical treatment of the insane*; with the two-fold view of rescuing them, as far as I am able, from that depreciation which I am convinced

they do not merit, and of rousing the attention of medical men to the subject, because the opiates and mercury are auxiliaries in the cure of the insane of far too great moment to be laid aside merely because the authority of great names is against them. Independence in the practice of physic is as essential to excellence as in any other pursuit where the mind of man is called upon to make its way through a devious and obscure path. He who is guided solely by precept and example can confer but a negative benefit on mankind, and will not advance one step in original excellence and useful discovery: all his merit, like that of the devotees of Bramah, will consist in a lame and blind subserviency. But, however, I would strongly caution the inexperienced never to venture on the use of medicines of extraordinary power in the cure of insanity—as, for instance, on the hydrocyanic acid and colchicum: enterprises of this sort are only justified by much previous study, wary experiment, and cautious induction.

‘It is quite impossible to rely upon the accounts which the insane give even of symptoms of great urgency. They will tell you of sensations they perceive not, and deny sensations that are obviously acting powerfully on them: this has led me to be extremely cautious in the exhibition of new and powerful remedies. Forty years and upwards have made the digitalis familiar in practice: not so the colchicum or hydrocyanic acid. The digitalis shews when it acts upon the constitution, by its effect upon the pulse; and a very moderate degree of caution will enable an experienced practitioner to give the digitalis in the treatment of the insane, even should he be ignorant of the deceptive manner and language of patients of this class:—the pulse will be a sure index. But, if this medicine had been given at the time suggested by Dr. Withering, and in the doses, too, prescribed by his disciples, and nausea and vomiting had been the signals for diminishing or suspending the medicine, I have not the slightest doubt that death must frequently have been the sequel of such practice. The safe, and therefore the only justifiable mode of proceeding, seems to be to administer no medicines to the insane, *with the use of which we are not familiar, and that too only after being well versed in the peculiarities of the insane.*’

Dr. Knight seems to limit the advantage of the shower bath to relieving headach, and irritability in old cases: we are inclined to think it capable of much more extension. The use of the tepid bath is generally attended with advantage, and particularly perhaps to the melancholic. It helps to restore the skin, which is commonly in an unhealthy state, to its natural condition, and is productive of general tranquillity. We have always regarded the circular swing as a remedial means of very doubtful propriety, and classed it with the attempts to relieve lunacy by inducing intoxication. It seems to have met with more favour from Dr. Knight; but his principal recommendation of it is, that, by inducing

vomiting, it relieves dyspepsia with acidity. He also praises it for its power of removing constipation ; which state, however, he previously observes, is not very common to maniacs. As for the recommendation of this process ' in some inflammatory affections of the viscera of the abdomen, and probably in the commencement of some fevers,' it is surely only an example of a total forgetfulness of the nature of the means in a blind admiration of the end. It would really be worth something to see such a proposition made to a patient, not a madman, or to a consultation of sane physicians.

Among the obstinate cases of insanity, we fear those cases in which insanity is combined with epilepsy are the most difficult of cure. The author before us has succeeded in restoring eight patients, out of fifty-eight thus affected, to a state of sanity : his observations on the treatment of this somewhat hopeless class of cases are as follow :—

' Although I cannot give the particulars of my treatment, I trust every practical purpose will be answered by an outline of the methods I generally pursued. I have freely used the spirit. terebinth. rect., as recommended in the Edinburgh Medical and Surgical Journal by Dr. Edward Percival, frequently with much benefit, the fits being often suspended from their usual accession, and when returning being less violent. Added to this, I have checked the circulation of the blood, when necessary, with the foxglove, and aided the stomach and liver with carbo. sodæ pil. hydr. and columbo, according as the use of these medicines would be indicated in ordinary practice. Nor have I hesitated to give all these in conjunction, or variously combined ; for I am long since quite satisfied, that much more can be effected by a skilful combination of various remedial means than by the most judicious exhibition of an isolated remedy. Simplicity in prescription is a good way to learn the practice of physic ; but it does not appear to me always the most certain method to attain our object. Various other means advocated as remedies in epilepsy have been used, as the cuprum ammoniata, argent. nitrat. valerian, &c. ; but I have seen no benefit result from their use, in which I have been much disappointed, since so many distinguished physicians speak highly of these remedies in the cure of epilepsy. When the general health and appearance of the patient did not forbid, I have taken blood in small quantities, from four to six ounces, from the arm, or, which is better, from the jugular vein, with uniformly good effect in shortening the duration of the fit, and in rendering it much less violent : but this bleeding should not be after the fit, nor during it, but immediately preceding it. In these, as in all other cases attended by derangement of the mind, the bowels should be always kept in an active state, but not purged. Straightening the hands and limbs has very frequently appeared to put a stop to the progress of the fit ; and where it can be effected without such violence as to hurt, I have always per-

mitted it, and sometimes advised it. This is a vulgar practice and, like most other vulgar practices, has, I believe, some truth for its foundation.'

As Dr. Knight's observations are founded on a very extensive acquaintance with the practical details of mental disorders in a very considerable public institution, it is perhaps to be regretted, that he did not, by confining them more to practical considerations, give fuller information concerning the treatment of forms of malady which are yet, in a great proportion of cases, perhaps too soon given up as incurable. We should have been glad to hear the result of his experience, as to the degree of hope that might be founded on circumstances connected with the peculiar causes of the disease; on the effect of a generous diet, or the contrary; on the effect of a free employment of mercury; and on the general results he has observed from the employment of various kinds of counter-irritation. Nor would additional evidence concerning the actual effect of nauseating doses of the tartarised antimony be at all superfluous. Those only who have had much to do with lunatics know the disappointments which attend almost all varieties of treatment in that peculiar department of practice; and we should be sorry not to hope that the control of medicine over all shades of maniacal disorder will not yet be materially increased. This can only be effected by the nice discrimination of the different forms and stages of these maladies of which we have already spoken, and by a careful adaptation of rational and appropriate measures to each.

Notwithstanding Dr. Knight's opinion, on which we have already animadverted, of the extreme rarity of cases of insanity which arise from moral causes, he has devoted a considerable portion of his book to a consideration of the moral treatment of the insane. We quite agree with him as to its great importance; but can with difficulty imagine how he reconciles the idea of its value with his views of the common origin of the disorder in bodily disease: for the bodily disease must be acute or chronic; if acute, and capable of relief, it is not to be supposed that the mental effects would often have had time to become so rooted as to remain after the removal of their original cause; and if chronic and irremediable, we do not see how the effect is to be removed by treatment which has no power upon that state from which the effect arises. The truth is, that regulation of the mind is universally acknowledged to be beneficial, and often found to be highly advantageous. The majority of lunatics are very sensible of what passes around them, of what is said, and of what is done, and capable of receiving a great variety of impressions.

Many of them are persons given to various little self-indulgences, and require to be controlled and humoured, laughed at and scolded, by turns, very much like children. With the exception of those who are furious, all are in some degree benefited by being compelled to observe regular, cleanly, and decent habits, and to restrain their conversation within certain limits which they soon find out to be expected. Few of them are insensible to encouragement and little rewards, or to degradation and such punishments as can with propriety be imposed for contumacy or violence. And these circumstances do not merely indicate the propriety of an enlightened moral treatment, of watching for intervals of reason, of aiding the revival of that blessing, and of opposing without indiscretion the delusions, and correcting without asperity or impatience the mistakes of lunatics, whose reason absolutely depends on the delicate penetration and practical adroitness of those about them. They further shew the importance of classification, and the cruelty of confining the curable with the incurable; or, to speak more strongly, the impropriety, *in any case where it can possibly be avoided*, of letting lunatics *associate with lunatics*. This last consideration has been, we think, universally overlooked, or at least disregarded; and certainly it would often be impracticable, or very difficult to combine a separation from other maniacs with that separation from accustomed scenes and persons which is of such invariable advantage: and for the same reason, it is too often, we fear, forgotten, that a lunatic may be better from home, and yet in a state to make the daily association with mad people a perpetual affliction. Until considerations like these shall excite more attention, we shall not fully know how much we can accomplish in diseases of the mind. It matters not with what skill medicine is administered, with what care lunatics are guarded, in what security they live,—so long as convalescence is checked by perpetual imprisonment, and the feeble returns of reason are discountenanced by the presence of the mad and the absurd,—so long as the half-restored patient finds that friends and physicians unite in preventing him from the enjoyment of all rational society; and his meals, and his exercises, and his sleep, are disturbed by the fantastic tricks, or wild vociferations of those *yet* in the insane state from which he knows himself to be *recovering*,—so long will every lunatic asylum in the kingdom number among its inmates *many* individuals who might have been saved to their families, mothers, fathers, husbands, wives, lost to all hope of happiness, and all prospect of recovery. Dr. Knight thinks it of great importance to conceal in some cases from sensitive lunatics, even in the first

onset of their disorder, your opinion of their being actually insane. He thinks such patients often suspect their state to be such, and are greatly agitated by having their suspicions confirmed. What then must be the feelings of a patient, fully conscious of having been mad, and yet of being to a certain degree recovered, to find that the remaining weakness, or irritability, or inconsistency, which yet adheres to the character, is considered to preclude all hopes of a confirmed steadiness of mind; and that the more urgently he presses his entreaties to be restored to the world, nay, even the more calmly and quietly, the greater is his deception judged to be, and the worse his state?

The following remarks of our author concerning the moral management of the insane appear to us to be so sensible as to justify quotation. If in any thing we differ from him, it is in putting more confidence in occasional, and well-timed, and very brief attempts to reason with the patients.

* It is the daily duty of the superintendent of a great number of lunatics to soothe the irritable, repress the insolent, cheer the desponding, calm the excited, check the forward, encourage the timid, resist the importunate and petulant, but *carefully* to attend to reasonable requests; for he has daily causes to try; and he must, at one and the same time, be counsel, judge, and jury: and as lunatic litigants frequently possess great acuteness, and always much irascibility, it becomes no trifling task to reconcile conflicting pretensions. He is, however, importunately called upon to decide, and his judgment must be supported by fair and conclusive, or at least plausible reasoning; or discord, discontent, and suspicion, will speedily supersede confidence and an affectionate respect; for when the matter does not touch upon the peculiar hallucination of the lunatic, he generally pays much attention to, and acknowledges the force of reason. Frequently the quarrels of lunatics do not arise altogether from deranged notions of right, but from the same malevolent passions that beget contentions amongst the more sane part of mankind. Lunatics very generally regard with derision or compassion the hallucinations of their fellows, and permit them to indulge in their eccentricities with the forbearance of the sane. It is a curious and interesting spectacle to see them thus acting towards one another. The proud, however, form a general exception to this rule; rival monarchs rarely agree: the only exception that occurs to my recollection, is, where one mighty potentate is always exceedingly amused at the absurdity of any one pretending to regal power without his sanction and authority. The anger which he evinces is manifested in epithets of his sovereign contempt, accompanied with bursts of deriding laughter. Such conduct as this requires no interference, much less expostulation or reasoning; either the one or the other would be only parallel to the administering stimulating drugs to those already in a state of excitation; maniacal fury would pro-

bably be the result of both practices. On the other hand, it is a great error to pretend to coincide in opinion with the lunatic, acknowledging his pretensions, confirming his opinions, and saying every thing that may be supposed to be pleasant and soothing: fortunate indeed will be the result if the effect is not absolutely the reverse. The lunatic, for instance, who has thus been confirmed in his belief of his own sanity, at once becomes restless, irritable, and importunate, although he was previously tranquil and contented. I have known this apparently trivial error in moral management produce raging and ungovernable madness. To me it appears equally absurd, and I know it to be equally prejudicial, to reason, as it is called, or argue with the lunatic, for the purpose of convincing him of his hallucination. Many a well-meaning person, confiding in the cleverness of his reasoning faculty, may be seen combating the false perceptions of the peaceable lunatic; for it is with the peaceable only that these sage persons enter the lists; they never venture to engage with the turbulent or the excited, although frequently the saner of the two. The peaceable lunatic becomes at first a tranquil and willing auditor; till, finding his understanding insulted, by the evidence of his senses being either absolutely denied or boldly questioned, he becomes indignant at the barefaced assurance that would impose on him as truth, that which the evidence of his senses, perhaps anxiously and repeatedly examined, tells him to be false. It will be found most prudent, most conducive to the patient's recovery, to permit the accuracy of these insane perceptions and morbid ideas to go unquestioned, and perfectly unheeded, to carry the lunatic's attention to a very different subject, and to fix it, as much as possible, on that which has no relation to the hallucination.

Dr. Knight's remarks on the amusements proper for lunatics are also, we think, dictated by sound good sense. He by no means approves of the patients being encouraged to write, as that indulgence, he thinks, tends to produce an unfavourable excitement of mind on the topics connected with their particular delusions. We join him in disapproving the solitary exercises prescribed to some lunatics,—for instance, long walks with a keeper unable to converse and amuse them. It may not always be safe to allow a gun to a lunatic who has been a sportsman,—but we have sometimes thought, that next to the advantage of having a pleasant companion, walking out with dogs was enlivening to the mind, and preventive of long and fruitless musings. Trifling contrivances must be adapted to the character of the individual; some may be benefited by fine scenery, and others amused and recreated by the bustle of a crowded town. In short, whatever gently exercises the mind, and withdraws it from its mad or melancholy train of reflection, is serviceable to the patient, and worthy of the practitioner's consideration. Many.

from their previous habits of life, will be more benefited by well-adapted bodily labour than by any intellectual amusement that can be devised. The following case presents too strong an instance of what can be done by perseverance and skill, even in circumstances strongly calculated to produce despair and supineness in those charged with it, to be omitted with justice either to the author or to him who reads for information.

‘ The safest labour, as regards the means, and the best, as respects moderate and wholesome exercise, seems to be the use of the common wheelbarrow. The utmost advantage has been experienced from its use among the patients under my care, not only of the poorer class, but of those who were more wealthy : I will select one remarkable case in illustration. The patient had been some years confined in a private asylum ; and a commission of lunacy being held upon him, it was declared, on the evidence of two physicians of great experience, that he was an idiot. To such an extreme state of apathy had the mind of this most wretched hypochondriac, for he was no idiot, been permitted to sink, I conclude, by the injudicious treatment he had received, that his cure had long been considered to be quite out of the reach of art. For days, weeks, even for months, if permitted, he would stand in one particular part of his room, pulling in pieces one particular part of his dress, and tying it in knots ; incessantly turning half round, and then back again, with a shuffling gait ; snatching a piercing and hasty glance at the by-standers ; and then shrinking, as it were, within himself, heaving deep sighs, accompanied with an under-growl of despair. I used various means to rouse him ; and after he had been under my care a considerable time, I resolved to employ him at the wheelbarrow. He would not touch the handles ; but being placed between them, he resumed his singular motion of shuffling half round, and then back again. He was urged, persuaded, tempted ; all would not do : he was inflexible. We then made him grasp the handles of the barrow, and two assistants held his hands there, and thus at length we went to work. It was a tedious business, and seemed fruitless. We worked ourselves, and, explaining why we wished him to do so likewise, endeavoured to convince him the exercise was not disgraceful : all would not do ; he would not touch the barrow longer than he was compelled. After one or two days spent in these endeavours, we at length tied his hands to the handles of the barrow with pocket handkerchiefs ; and putting him in the midst of a line of five or six barrows that were all wheeling on one path, he was constantly urged on by his fellow-labourers, who were also lunatics. He demurred, and flounced about considerably at first ; but shortly, like a restiff young colt newly in the breaker’s hands, he set to work furiously ; and, instead of being a hindrance to the whole line of labourers, he urged them on smartly : this was to me a most gratifying triumph. The victory gained was followed closely up, and in a few days he was an excellent workman without

compulsion, and in about a week from choice. Still he was excessively taciturn; but being satisfied from the first he was not an idiot, (indeed I was one of the three appointed to examine him when the commission of lunacy was taken out, and gave my evidence to that effect,) I used various expedients to rouse his dormant faculties. At length, circumstances calculated to awaken the angriest feelings of any man, came to my knowledge; and I communicated the facts in a manner to stir him up to the utmost. The effect was sufficiently evident to shew that his attention was strongly excited; but the impression was not decisive of his recovery. We continued the wheelbarrow labour; his general health improved; and at length, I *know* after three, and I think about six or seven years nearly total silence, he began to converse: he proved to be a man well informed, and of very acute intellect. From this time forward he rapidly improved, and finally became rational; and was discharged from my care, free of complaint, but not till seven years had elapsed from the commencement of the attack.'

The greatest difficulty seems to be to find proper employment for the female patients. According to Dr. Knight's report of them, they seem much less disposed to occupy themselves than the men, less ingenious in their amusements, and consequently less orderly and manageable in an asylum. These peculiarities may depend in part on the insufficient exercise of women's faculties in the course of their education, and on the general limitation of their labours to common household affairs, which require very little exertion of thought. Equal differences will be found, we imagine, between men who have been accustomed to different occupations, those having always the greatest resources whose habits of life demanded the greatest exertion of intellectual power.

The present officers of the Lancashire Lunatic Asylum not many months ago addressed a Report to the Magistrates of the County on the subject of the Application of Religious Worship to the patients, and they certainly seem to have given the matter the serious attention which it so well merited.* Religious, like moral endeavours, as they regard persons in an unsound state of mind, are neither to be contemned, nor indiscriminately employed. The weakness of a lunatic's mind is such that he seems to have a much greater facility in acquiring absurd than rational notions. It is easier to make him change his delusion than to make him quit delusion altogether. To introduce, therefore, into a lunatic asylum, an enthusiastic or gloomy divine, to give him

* The Report was inserted in our Number for December last, Vol. xviii. No. 3 of the present Series, p. 553. In the first Number of the present Volume, p. 51, will be found some extracts on the same subject, from the records of the Glasgow Lunatic Asylum.

full power to converse at all hours with insane patients, to permit him to address long and *awakening* discourses to them from the pulpit, would, there can be no doubt, exasperate the malady of those already excited, confound the timid, depress or terrify the convalescent, and move the ready derision of the idle and mischievous. But, with certain limitations, dependent upon the discretion of the medical officers, that religious instruction, and the orderly attendance on divine worship, with the aid of a sincere and rational minister, is productive of the best effects, is proved by an overwhelming mass of authorities. Those of the patients who seem the most gloomy and absorbed, feel comfort from it; the convalescents are comforted; some are roused, and some are subdued into an effort towards propriety of demeanour: a day which has always been, perhaps to patients of every class, in some degree more tranquil and holy than the rest of the days of the week, freer from care, or from labour, or from vice, is recalled, with all its benign associations, and the effect, even when not strikingly beneficial, is at least soothing. Strong in assurances that this is the case, from persons of minds most unprejudiced, and even not without some little jealousy of the direct interference of the divine, or of the logician, we should pronounce him who has the care of lunatics hardly less than criminal, if, from carelessness, and an indisposition to attend to such high considerations, he should venture to interpose his authority between a suffering lunatic and the Great Being who permits, but does not disregard, his afflictions.

In addition to the testimony contained in the documents above referred to, we shall here insert that of the author before us, because it is founded on the test of observation, undoubtedly the best test when the subject is one which is perhaps of all subjects the least often approached with temper.

‘First.—The chief advantage that seemed to be derived from divine service being performed on a Sunday was the satisfaction resulting from a consciousness of having performed a sacred duty; although at the same time the insanity of the majority rendered them quite incapable of duly appreciating the merits or the importance of the service. I could bring many cases forward to shew not only the existence of this incapacity, but also that the insane notions of the patients have been called into action by the service, both in my own practice and that of others: see the Bethlem Report, p. 49 to 53. One of my patients never heard the devil mentioned, without turning to me, and saying, “He is your servant:” yet divine worship afforded him tranquillity and gratification. He was an incurable.

‘Secondly.—The orderly conduct of the patients at service depends chiefly on their general moral management. If they are properly regulated, there are but few patients who will behave improperly in the presence of their physician and his servants.

‘Thirdly.—When divine worship is regularly performed on the Sundays, lunatics in large numbers, say nine out of ten, recognise the pleasing solemnity of the day.

‘Fourthly.—Lunatics, although of the class called recent, if they do not labour under excitement, or great proneness to excitement, may be with advantage permitted to attend.

‘Fifthly.—I never saw any injury, but, on the contrary, much benefit, derived to the convalescents by a temperate exercise of religious worship. I deliver this as the result of experience, and not as *my opinion* only.

‘Sixthly.—I never could discover that religious exercises produced any permanent effect on the general conduct of the lunatics under my care, beyond the immediate advantage of allaying that importunity and restlessness which resulted from the absence of divine worship; and rendering Sunday, instead of being a day of idleness, gloom, and discontent, the most cheerful and pleasing day in the whole week.

‘In these observations, I presume not to express any opinion on that part of the subject which belongs more properly to the clergyman and the psychologist. I purposely avoid considering this question in a psychological manner: it does not belong to the province of the physician; if, indeed, it belongs to the province of any man. The question appears to me to lie between the creature and his Maker, and that too in a very peculiar manner. I have already stated, that a desire frequently exists, and that comfort is derived from its gratification; but I do consider it to be the proper province of the physician to ascertain if religious misconceptions are making an injurious impression on the intellect, and also that it is his solemn duty to yield to the religious desires of his patients in every degree that will not endanger their intellect, or impair their health: this has been the rule of my own conduct.’

To turn from these considerations to the power of music on the mind of lunatics, would argue perhaps an indecorous levity, if it were not for the purpose of saying that, independent of the general belief entertained by those accustomed to insane people that their feelings may be really controlled by harmonious sounds, and with something more than temporary benefit, Dr. Knight gives a case in which melancholia seems to have been entirely dispersed by their power; and strongly recommends both vocal and instrumental music as *important* means of cure. The range of means which may be employed with advantage by those who have the charge of lunatics is certainly very wide; but in proportion as it is so, the choice is difficult, and the adaptation demands the soundest judgment. We have great reason to be proud,

that ours is one of the countries in which philosophers, divines, and physicians, have combined their efforts to restore the empire of human reason wherever it is overthrown: the first debt of gratitude is due to the memory of Pinel, who for this alone should have a statue erected to him in all countries in which the precious gifts of the mind are prized. Nor should we ever forget how greatly the amelioration of the state of lunatics was brought about in this country by the people called Quakers, but who by this, as by many other exertions of wise benevolence, have sufficiently vindicated their title to the appellation of *Friends* in its most ample signification.

The following are stated to be the results of the treatment in the Lancaster Lunatic Asylum:—

‘ OLD CASES.

| Men. | | Women. | |
|--|-----|--|-----|
| Recovered | 98 | Recovered | 43 |
| Discharged relieved | 8 | Discharged relieved | 5 |
| Ditto by request | 16 | Ditto by request | 6 |
| Dead | 99 | Dead | 60 |
| Improved and under treatment | 31 | Improved and under treatment | 17 |
| Unaltered | 90 | Unaltered | 79 |
| Worse | 16 | Worse | 9 |
| Total | 358 | Total | 219 |

‘ RECENT CASES.

| Men. | | Women. | |
|--|----|--|----|
| Recovered | 33 | Recovered | 46 |
| Discharged relieved | 1 | Discharged relieved | 1 |
| Ditto by request | 1 | Ditto by request | 3 |
| Dead | 4 | Dead | 3 |
| Improved and under treatment | 0 | Improved and under treatment | 9 |
| Unaltered | 0 | Unaltered | 2 |
| Worse | 0 | Worse | 1 |
| Total | 39 | Total | 65 |

Dr. Knight's book is concluded by a very singular narrative—being no less than the description by a gentleman who has recovered from temporary insanity, of his sensations and ideas during the period of his affliction. It is a most curious and instructive document; and should be carefully studied by those whose practice is directed to mental disorders.

The character of Dr. Morison's *Outlines* precludes any thing like an analysis or review of its contents, which are

little more than notes or brief heads of his lectures. They present, however, a clear arrangement of all the parts of a comprehensive subject, beginning with remarks on the brain and nervous system, and enumerating the faculties of sound mind, the peculiarities of the insane state, the causes of insanity, the appearances on dissection, and the means employed as remedial, with general observations, including a view of the subject in relation to medical jurisprudence. We question not but Dr. Morison's lectures on these topics are very interesting; and if he can combine *clinical* instruction in this particular department with the lectures, we have no doubt of his promoting a knowledge of it which will be very serviceable to his pupils. This work is illustrated by thirteen finely-executed engravings, by Lizars, representing, with indubitable fidelity, different states or forms of maniacal disorder. No attempt at description could convey to the reader the striking characters represented in these prints; and we think the hint afforded by this somewhat novel way of adding to the attractions of a work on insanity might most advantageously be acted upon by writers on general diagnosis. The striking but indescribable expression which is called *febrile*, the melancholy countenance of a patient labouring under complicated visceral disease, the peculiar complexion which attends chlorosis, the distinct appearance of the face in children affected by mesenteric disease, the general strumous character, the marked peculiarities of phthisis, the various hues of the face which attend diseases within the thorax, and many other physiognomical impressions of disease, would, we think, form no uninteresting series of prints, to assist the student's conception of what no language can clearly and fully describe. Such an undertaking would not be unworthy of the faithful graver of Mr. Lizars; but then the subjects would require to be selected by a physician not less accustomed to note the outward signs of disease than Dr. Marshall Hall.

M. Voisin's book on the Moral and Physical Causes of Mental Disorders, is an ingenious attempt to prove that insanity is always an idiopathic affection, and never produced by physical causes, excepting such as are seated in the brain; and this opinion he has chosen to support by copious collections from ancient and modern authors, and by long and very unnecessary details on nymphomania and satyriasis, which, at least in our country, are not very commonly met with.

To follow this author through all he has written or quoted on the subject of moral education, would be a very fruitless labour; and to pursue his refinements concerning the effect

of political institutions, wholly useless : neither is it necessary to present our readers with examples in proof of the influence of superstition in disposing to mental extravagances, and particularly of a superstition opposed to those laws which nature has forcibly engraven on the hearts of both sexes, and the effects of which in Roman Catholic countries seem to be no less frequent than they are lamentable and monstrous. With respect to the influence of trades and professions, we shall only remark, that the opinion, often expressed by authors on insanity, of the greater frequency of the disorder among those who most exercise the faculties of their minds,—an opinion which even Dr. Morison appears to entertain,—does not appear to us to find support in history, or in the biography of eminent persons, from the first dawn of intellectual exercise, up to the present times of unexampled intellectual struggle. Those professions or pursuits which, by the vicissitudes to which they are exposed, most exercise the different *passions*, do indeed most frequently exhibit examples of mental disturbance. In a list given by M. Esquirol, and quoted by M. Voisin, out of 164 lunatics, there were 50 merchants, 33 military men, only 10 advocates and men of business, 4 chemists, and 4 physicians. Fodéré also observes, that shopkeepers, merchants, and military persons, furnish the greatest proportion of lunatics. These facts surely prove, that alternations of hope and fear, great accessions of fortune or great reverses, and disappointed ambition, vanity, or avarice, are the causes which, far more than any *mental* application, disturb the mental faculties ; and it is almost unnecessary to observe, that the most eminent statesmen whose fame is recorded in history, the greatest poets of whom the world has had to boast, and the philosophers who have looked with the most pervading vision into the works of nature, can be hardly said to present an instance of insanity among them. We would take the highest examples in each department, ‘ the foremost men of all this world ’ in past ages and in the present, and should confidently rely on the result of an inquiry into this circumstance,—a circumstance of very great interest, whether considered in a moral or physiological, in a metaphysical or medical point of view. The truth for which we contend derives some corroboration also from the age at which maniacal affections appear, and from the time of life which is for the most part free from so terrible a visitation. The minds of children are sufficiently tasked, nay, often far more than sufficiently ; but they go through the labours, the difficulties, the sufferings of their school-days, without being driven into insanity : exposed to the arbitrary humours of persons often themselves very

ignorant, and who give loose to the most violent passions in the exercise of their authority; under the infliction of long tasks, only to be mastered by the extremest exertion of their tender faculties; subject to long and dreary confinement, to numerous mortifications, to every kind of opposition and restraint;—we never hear of boys and girls going mad at school, or even under the care of their parents, where they are often far more severely dealt with than at school. During this period of life, however, although few days may be free from mental labours, the mind preserves its health; it is even undisturbed by all the moral troubles just enumerated, because the desires of children are few and simple, and if ardent always transient. Their hearts are never so wholly set upon one object, as to refuse consolation from another object of amusement. But after the age of fifteen, when the passions and affections are called into exercise, *then* we see that cases of mental disturbance occur, which often border on, and sometimes pass into, insanity. M. Voisin quotes a table given by Dr. Haslam, relating to the patients of Bedlam, from 1784 to 1794, which bears out these assertions: the number of these, divided according to age, is as follows:—

| | | |
|----------------------------|---|-------|
| ‘ From the age of 10 to 20 | - | 113 |
| Ditto 20 to 30 | - | 488 |
| Ditto 30 to 40 | - | 527 |
| Ditto 40 to 50 | - | 362 |
| Ditto 50 to 60 | - | 143 |
| Ditto 60 to 70 | - | 31 |
| Total | | 1664. |

To this table, M. Voisin appends a statement relating to 1193 patients confined at the Bicêtre, from 1784 to 1793; and of these there were:

| | | |
|----------------------------|---|-------|
| ‘ From the age of 15 to 20 | - | 65 |
| Ditto 20 to 30 | - | 329 |
| Ditto 30 to 40 | - | 380 |
| Ditto 40 to 50 | - | 236 |
| Ditto 50 to 60 | - | 130 |
| Ditto 60 | - | 53 |
| Total | | 1193. |

Other tables are given, and, in all, the proportion declines considerably after the age of sixty; and the cases only begin to occur in persons upwards of fifteen years of age. Considering the mental exercises of the young, and the frequent continuance of investigations demanding great mental power by persons more than sixty years old, we think these tables

furnish evidence, that insanity is more closely connected with the origin, excess, and decline of the passions, than with the individual extent of mental labour.

M. Voisin, we have said, asserts the idiopathic character of insanity in every instance: he denies that it can arise from physical disturbance of any organ *except the brain*; and he would seem to limit the causes in the brain itself to causes physical and moral, excluding those which are only functional. If there is obscurity in our interpretation, it arises from the original expression of his opinions by the author. He says, insanity is an idiopathic affection *of the brain*, dependent on causes acting *directly and immediately* upon it. (Preface, p. vii.) He is even inclined to say, that in all cases there are palpable organic alterations in the brain (id. p. viii.): and yet he admits (p. xi.), that acute delirium may depend upon sympathetic irritation produced by disease of other organs; affirming that this acute delirium is not insanity. Thus, if menstruation is suddenly checked, and insanity follows, he maintains, that the menstruation was disturbed by moral or mental causes, which also produced the insanity. If the lochia are suppressed, and madness displays itself—if the lochia are restored, and the mind recovers, M. Voisin still contends that the mental disturbance was the first link in the chain of morbid phenomena. If mania supervenes on the final cessation of the catamenia, the cause is still moral, and not physical. He has given a few cases, and quoted others, to prove these opinions; but we confess, that to us they seem but speculative and groundless refinements. In conformity to these views, if erysipelas of the face and head suddenly disappears, and mania supervenes, we suppose M. Voisin would attribute both the erysipelas and the mania to an original trouble in the mind. Let the functions of other organs of the body be as defectively performed as they may, they have no power, according to him, to induce such functional disturbance of the brain as can lead to insanity; they may produce acute delirium, but never a permanent disease. We believe these views to be incorrect, and to rest upon a very small number of cases; or if not, we certainly do not understand how M. Voisin separates the state which he calls acute delirium from the state which we call insanity. If menstruation is suppressed for a short time, and the mind disturbed during that time, then M. Voisin would say there was but acute delirium. If the amenorrhœa and derangement of mind lasted some months, or a year, then M. Voisin would say there was a moral or mental trouble which caused both affections. The state of the mind in the shorter disorder might be truly maniacal, according to our notions of

mania,—but M. Voisin would call it acute delirium, its denomination apparently depending not on its character, but its duration. That it often is truly maniacal in these cases, we are perfectly convinced; and yet M. Voisin's pathology affords him so many escapes, that we do not see how our opinions and his are to be fairly compared.

That insanity often arises from organic affections, or acute or chronic disease of the brain, we suppose to be generally admitted; that it is also often produced, without organic disease, by violent moral affections, we think is equally incontestable: but we go further, and conceive it not unfrequently to be occasioned by primary irritation of other organs, communicated, we do not pretend to say how, to the brain; and also occasionally to follow a sudden functional derangement of other organs, and perhaps especially of the uterus; and to come on, in other instances, after sudden changes in the condition of other parts of the body, as on the sudden recession of some cutaneous diseases; in all which cases, the mental disorder is the result of some functional irregularity, vascular or nervous, in the brain, and is an *effect*, and not a *cause*, of the other existing phenomena. These we consider not to be theoretical views of the causes of mental disorder, but founded on common observation and experience; and we observe that M. Voisin, in his anxiety to prove that the order of the phenomena in the last-mentioned instances is the reverse of what we state it to be, is driven to the supposition, that in some cases the mental affection which he considers to stand in the relation of cause to the effects spoken of, is so obscure as to escape observation, and even the observation of physicians. It is surely not necessary to comment upon this argument, or indeed to notice any more at length the opinion which it is adduced to support. The error of M. Voisin appears to be, that he insists on the constant occurrence of an occasional circumstance. The same moral disturbance which produces derangement, may, and undoubtedly sometimes does, produce derangement of the corporeal functions; and this is all that seems to be firmly supported by general facts bearing on the pathology of mental disorders.

We pass over those chapters of M. Voisin's work relating to hysteria, nymphomania, and satyriasis, in which he labours to prove, that in every instance of these disorders the cause of the malady is in the brain, or we rather imagine in the cerebellum (out of complaisance to Gall and Spurzheim), and not in the organs belonging to the generative system. That there are many cases of hysteria not dependent on uterine disease, we do not doubt; as to nymphomania and satyriasis, we do not profess to have seen much of these complaints, to

which the author has devoted a very large portion of his work, merely, as it would seem, to give strength to his peculiar opinions. There is also a long chapter on the hereditary character of mania, to which we turned with some interest; but it contains little on the subject of its title, and that little, as we conceive, not very correct. This part of the subject is of very deep interest, in times when, according to the general opinion, insanity is daily becoming more common. It is probable, that the laws which govern the production of varieties in the species, may, to a certain extent, be applied to the production of hereditary madness. We sincerely hope this inquiry will some day be brought fully before the medical public; and cautiously conducted by persons neither anxious on the one hand to support opinions agreeable to particular families,—nor, on the other, under the undue influence of ill-founded fears. M. Voisin has merely expressed a few common-place opinions; such as that of children born before the parents became insane, being less likely to be insane than those born at a subsequent period, quoting Burton as an authority for believing the children of aged parents to be prone to melancholy, &c.: all the rest of the chapter consisting of observations on the moral education of children who exhibit an eccentric character,—a subject of much interest, but in the management of which we remark nothing which is not familiarly known to all who have ever given any consideration to the best method of conducting the education of young people.

The morbid anatomy of mental disorders has lately attracted a considerable share of attention among the French practitioners; and although, as commonly happens, the investigators into a difficult subject seem willing to end their labours by a retreat into the first theoretical resting-place that presents itself, yet the facts which have already been collected are of value and importance, and nothing but a patient perseverance in examinations, and a careful comparison of the appearances with the symptoms, in a sufficient variety of cases, seems to be wanting to establish a more correct knowledge of the morbid states of the brain to which certain phenomena of disordered mind may be referred, with at least a great share of probability, during life. An extract or two from M. Voisin's work relating to this matter must close our present notice of the subject. We shall first insert the result of Dr. Georget's anatomical observations on the crania and brains of lunatics, made when M. Voisin was his pupil.

'In many of the crania the anterior half was too forward, and the other half too backward: others were irregularly developed,

swelling out on one side, oftenest on the right: in many, the lateral was equal to the antero-posterior diameter, and the arch too elevated. The cavities of the base were often irregular, those of one side being greater than those of the other. In about a twentieth part of the subjects examined, the bones of the cranium were thick, either generally or partially,—sometimes only in the situation of the coronal suture: the thickness of some was nearly five lines. More frequently the bones were very hard, very white, without diploe,—sometimes resembling ivory; but some were, on the contrary, almost all diploe, and extremely light. Dura mater rarely altered, sometimes very adherent to the cranium, apparently thickened in many cases,—in three instances presenting ossifications in its great fold; red or grayish and irregular patches, and false membranes or layers, on the arachnoid. I may add, that this membrane was most commonly smooth and transparent, but sometimes thickened, opaque, and resisting, without any loss of smoothness of its free surface. Pia mater injected; its vessels red and hard: the same membrane thickened, infiltrated with serosity, forming a layer of a line or more in thickness, and of a gelatinous appearance, but consisting only of limpid water, which escaped when an incision was made. Volume of the brain sometimes less than seemed suitable to the size of the cranium: the brain in some subjects very firm, and not to be cut without difficulty; the white substance, as it were, glutinous, elastic, and undergoing extension before it broke: more commonly the brain is soft, and then sometimes the gray substance is pale or yellowish, and the white substance of a dirty hue; so that the two were almost alike in colour, and somewhat so in consistence: the convolutions sometimes very small, and separated by serosity, or by the thickened pia mater. The internal cavities of the brain large in some subjects, and small in others, often filled with serosity, which was commonly clear and limpid. Plexus choroïdes generally void of blood, discoloured, often filled with hydatiform vesicles. Partial softenings of the brain; erosions; ulcerations of the surface of the ventricles; carcinomatous tumours; cerebellum ordinarily softer than the brain,—sometimes partially softened, and reduced to *putrilage* (*partly decomposed, and as if reduced to bouillie*). Pons varolii, medulla oblongata, and medulla spinalis, very seldom altered. We have had opportunities of observing (with M. Mitivié) many cases of acute mania terminating in death in the course of a few months, in which we noticed a considerable sanguineous injection, with increased consistence of the cerebral tissue: and several other cases of chronic mania, with general paralysis, and epileptic or apoplectic seizures, in which the surface of the convolutions was softened and adherent to the pia mater. MM. Delaye, Foville, and Pinel-Granchamp, house-pupils at the Salpêtrière, say that they have found manifest alterations of the external gray substance of the brain in all the cases in which intellectual disorder continued until death. In the greater number of lunatic subjects they have also seen marblings of the superficial gray substance, of a more or less lively red colour; sometimes a

kind of increased consistence, and sometimes even a remarkable softness of the same part; often partial adhesions of the pia mater to the surface of the brain, particularly in the anterior part; in other cases, so intimate in the whole course of the cortical substance, that in removing the membrane, a remarkable thickness of the gray substance was removed also. The intense red colour of the cortical substance corresponded with acute symptoms of insanity: in cases of dementia, on the contrary, there was generally only light and scattered marblings, and in their intervals the gray substance was very pale, and softer or denser than natural: it often also seemed to be diminished in thickness: in some cases the limits of the two substances of the brain were indistinct.'—P. 356.

These are undoubtedly valuable details, and their value becomes more apparent when compared with the labours of M. Bayle in the same department. Considerable difficulty must yet be felt in any attempt not only to connect these appearances with the various kinds of mental alienation, but even to determine whether all these, or if not all, what particular morbid changes really belong to insanity, or cause it? It is, moreover, possible, that in many cases of insanity, the disorder of the mind is produced before the morbid changes detected on dissection: functional disturbance in the brain may be incompatible with the tranquil exercise of mental power, and this may pass on to actual disease, and to organic change in a subsequent stage of insanity. There may be no constant connexion between many of the products of disease in the brain, and any one set of morbid mental phenomena. In short, we are at present merely on the threshold of this great inquiry; and many observations require to be made before we can venture to lay down any certain propositions relating to its intricate but exceedingly interesting subject. M. Bayle may very probably be incorrect in some points,—but we confess we think highly of his book: M. Voisin does little more than detail the opinions of others, and has certainly not facilitated the search after truth by devoting so many pages to the vindication of his partner M. Falret. The latter gentleman, it seems, had often spoken publicly of the importance of being able to assign particular species of insanity to specific organic changes in the brain; and therefore M. Bayle is to be found great fault with, is to be the object of innumerable exclamations and interjections, because, perhaps profiting by this hint, or perhaps having himself come to the same conclusion, which was certainly rather an obvious one than otherwise, he was the first to make a systematic attempt to effect this important end. The greatest offence was, however, his not sufficiently alluding to M. Falret, and his publishing his book with the title of *New*

Doctrine of Mental Disorders. Now it certainly was a new doctrine ; and although M. Falret has alluded to it as a doctrine which he some day or other meant to explain, he had by no means so unfolded it to the medical world as to take from M. Bayle's book the character of novelty. The following passage, we believe, expresses nearly all that M. Falret had distinctly advanced on the subject, although he undoubtedly had previously given an outline of a more extensive plan of investigation,—an outline that he has not even yet, if we are not misinformed, found time or opportunity to fill up.

‘ M. Falret believes, definitively, that mental maladies are caused sometimes by a defective conformation of the cranium or brain, native or acquired ; sometimes by a lesion of the membranes. He admits also, that, in other cases, mental affections are to be attributed to hardness of the brain ; and in others, to partial or general ramollissement of this organ : in a word, that each of the lesions of the encephalon, and of its envelopes, *mentioned by his predecessors as an effect*, may be considered as the organic cause of some mental maladies. Nevertheless, he thinks himself authorised by observation to assert, that the most frequent of the alterations which are found in the encephalon and membranes of lunatics is engorgement of the vessels of the pia mater and the brain.’

M. Bayle will, we think, most assuredly be pardoned by all who have read his work, to which we have already more than once referred in this article,—a work characterised by singular marks of patient labour and observation,—for having omitted to ascribe it wholly to the above enunciations of M. Falret. The French reviewers, indeed, seem to consider M. Falret as the first person who has ever looked into the brain for the cause of insanity. We shall not dwell longer on these unhappy feuds, which augur ill for the successful prosecution of the peculiar branch of inquiry in which the contending parties are professedly engaged. Let M. Falret enjoy the reputation of being the first to draw the attention of his countrymen to the special injuries of the brain associated with its various maladies ; but let the honour also be accorded to M. Bayle of having been one of the first to enter vigorously into the path indicated by him : their precise share of merit in the matter is far less important to the public than the truth of their observations,—a consideration which seems well nigh overlooked in the wordy and prolonged conflict in which M. Voisin has volunteered to engage.

M. Voisin concludes his book with a chapter on the Treatment ; and in concluding our notice of it, we are sorry that we can only observe of this chapter, what may without any critical illiberality be observed of the whole of the work, that

it consists in a great measure of quotations from works already published, and in every body's hands; and that all which we find beyond these quotations is a continual expansion and spinning out of the most common-place information and opinions. The peculiar views of M. Voisin might have been fully detailed in a short paper. The perusal of the account of them in a tolerably thick octavo, is an affliction to which we are very much inclined to believe few readers except ourselves will willingly submit.

II.

ON THE TEETH AND GUMS.

Practical Observations on the Teeth and Gums, with the best Mode for their Preservation. Dedicated, by permission, to John Alderson, Esq., M.D.
By J. L. LEVISON, Surgeon-Dentist, late of 54, Berwick-street, Oxford-street, London. London, 1826.

WE have often tried to account for the apparent inability of dentists to acquire any kind of notion of English grammar. They are an active, useful, successful body of men, not remarkably characterised by diffidence; and so long as they keep to their filing, and sawing, and scraping, and stuffing, we feel no disposition to meddle with them. But when, not content with the immortality to be acquired in this way, they invade the province of their superiors, and pretend to be dictatorial in anatomy and physiology, and exhibit themselves in the inappropriate light of natural philosophers, we cannot help giving expression to our disapprobation of such ambitious proceedings. Here, for instance, we have a slim pamphlet, from, we dare say, a very worthy man, and an excellent inspector of the teeth and gums; but, by the course of dentistry, introduced with a preface, and what the author chooses to call an advertisement, and also a dedication, in which the sobrieties of syntax are exceedingly disregarded; and what may perhaps be a few pages of sensible, though not original, matter, ushered into notice with all the solemnity due to a performance which is to change the destinies of the world. '*Parturiunt montes, nascitur ridiculus mus.*'

'What innumerable sources of mental improvement,' says our philosophical author, 'would be derived from the study of the natural history of man, if given in a popular and pleasing form. Our *slumbering* faculties, when once *awakened*, must excite the mind's *energy* to *contemplate* the *link* man holds in the chain of created beings; and this study ought to *begin* with some knowledge

of the curious mechanism displayed in the structure of the human frame, where every part is so admirably adapted to the uses it has to perform in the general economy,' &c. &c. &c.

'It is by contemplating the organic structure of man that we become acquainted with the physical laws by which the various functions are manifested, and our minds are raised with adoration and gratitude to "Nature's God," as the source and cause of all things.

'With such feelings, I have, therefore, undertaken the pleasing task of writing the small work now submitted to the public.

'In the first part the natural history of the mouth is given,' (the natural history of the mouth!) which embraces the laws of the mechanical structure of the jaws,' &c. &c. &c., 'concluding with practical modes of preserving the teeth, and retarding the progress of decay, when it has once commenced its corroding action.'

Now all this is very probably thought extremely fine by many of the hundred and thirty subscribers whose names grace the publication, and without whose enthusiasm in the cause of the literature of the mouth this valuable publication (consisting of less than half that number of pages) might have been lost to mankind. There is another piece of information in the preface, for it tells us that Mr. Levison lives at 21, Mason-street, corner of Bourne-street. Exact knowledge of this kind, is, we see, very often given even by eminent medical authors, and may doubtless prevent mistakes, and counteract the unpleasant tendency of the public to forget the existence of individuals.

The preface is followed by the advertisement, in which the author says :

'I feel all that timidity for this offspring of my brain (as it is now entering "*en solitaire*" into a world where it may be much annoyed and vituperated) which the fond parent does when his son leaves him to take an active part in the theatre of life.'

'*En solitaire*,' indeed ! *en robe de chambre*, we should say, and very finely flowered and figured too, but not the less amenable to criticism, if it intrudes itself in this masquerade habit among the grave people of a profession which is in its constitution averse to such holiday finery.

'To you,' continues Mr. Levison, 'then, sagacious critics, I once more appeal, as I reverence your great penetration; yet, though dragged before your self-constituted tribunal, I stand with conscious rectitude.'

To say nothing of the novel and ingenious sarcasm conveyed in this sentence, who can be insensible to its spirit of heroic defiance? We assure the author, with the most perfect sincerity, that we do not think him altogether a male-

factor. 'You may convict me,' he says—for he seems loath to leave the figurative style of the Old Bailey—you may *convict* me,' he says, 'of having received *much* instruction on the anatomy, physiology, and pathology of the mouth, from many French and German writers, and from our own distinguished countrymen, Mr. John Hunter and Mr. Joseph Fox, from other writers since their time, and from a Treatise on the Teeth, published in London many years past, by Thomas Berdmore, Esq.' This candour disarms us, and we are very willing to believe, that no more serious charge can be justly brought against Mr. Levison.

Of the dedication we shall say little, out of respect to the enlightened physician to whom it is addressed, who, however, must have felt himself much interested to learn from it that the premature loss of teeth 'may occasion many deformities.' The dedication, like the preface, is dated 'corner of Beane street,' which leaves no doubt upon our minds that it is by the same hand.

After all this comes an *introduction*, in which we are told, that 'as the *teeth* may be considered one of the most interesting parts of the animal economy, a knowledge of the formation of them will furnish to the *contemplative mind* many rational sources for *philosophic pleasure*.' This is a very refined view of the subject, doubtless, and a very proper introduction to the philosophy of mastication. Most people are accustomed too much to regard the mere utility of their teeth in their connexion with eating, and are not generally to be withdrawn from this association of ideas by any thing short of the toothach. There is nothing else which particularly attracts our notice in the introduction, excepting the frequent allusions to the Almighty, which, if they be not intended to gratify the numerous party called the evangelical, and who perhaps abound on the banks of the Humber, are at least instances of very bad taste: thus we are told, that 'it demonstrates the benevolence of the Creator, that in the structure of the human frame every exigency is provided for, and that *peculiarly so in the mouth*:' and, further, that the articulation of the lower jaw 'must excite, even in the commonest observer, the most vivid feelings of adoration to the Almighty Artificer;' and in the next page, that the gums 'have been placed by our benevolent Creator to act as the *thermometer* of the mouth;' and, after all these effusions of piety, the author brings his introduction to a close in these words:—

'When in the act of swallowing liquids the tongue becomes a gutter, rather inclined, and by this contrivance a spout is formed at

the back part of it to convey it down the funnel-shaped cavity (pharynx) leading to the stomach. When solid food has undergone the masticatory process, the tongue collects all the particles together, and places them on its centre, which acts as an inclined plane; but as it slides towards the cavity, the side placed nearest the larynx becomes so considerably raised in its inclination, that not a particle escapes down the respiratory passage; but the mass is propelled down the funnel-shaped one. Thus, when we contemplate our complicated mechanism, *we can but exclaim with feelings of gratitude to the Author of our being*, "that we are fearfully and wonderfully made."—P. xiv.

Greatly enlightened must Mr. Levison's religious subscribers be to learn, that food is prevented slipping into the windpipe by the rising up of one of the sides of the tongue; that, for instance, nearest the larynx; and exceedingly interested must they be to be told, that, whilst they are eating and drinking to support the body, their tongue is alternately a gutter, a spout, and an inclined plane. That there is abundant proof in the structure and faculties of the human body, that the Being who formed it is infinitely benevolent, none can be more deeply convinced than ourselves; but we do not quite profess to see how the mere circumstance of being 'fearfully and wonderfully' made, and the additional one of not being choked in our very first attempt to eat after birth, can be justly considered as especially calling for our gratitude. Most sincerely do we think we ought to return humble and hearty thanks for our creation, preservation, and all the blessings of this life; but these thanks proceed from a due consideration of the charm of existence, of which repeated calamities cannot deprive it; of the continual forbearance of our Maker to punish our minds or bodies as our negligence or vices often deserve; and from observing how curiously those senses, without which life could not be preserved, are made the means of gratification as well as of security. But the author before us seems to look upon human beings as mere receptacles of teeth, and in fact to consider his patients and his friends as all mouth: in another part of his work he alludes to the game of cricket as being rather dangerous, not because the use of one eye may be destroyed, or because a man may be killed by a blow on the stomach,—but solely 'from the damage that may be done to the *mouth*.'

The practical observations in this work fill about thirty pages; and though perhaps they do not contain much that is new, they are much more distinguished by good sense than the reader of the introductory matter is prepared to find. His remarks on the effects of tartar on the teeth and gums, may be given as a pretty fair specimen of the information to

be obtained from the book, and of the author's manner when he does not speak in 'Ercles' vein.'

'The substance that deposits itself on the teeth, of a yellowish, or blackish yellow colour, has been termed (although improperly so) *tartar*, it being simply a phosphate of lime and animal matter.

'The compound earthy substance is held in solution by the saliva, and when this fluid is evaporated during sleep, it is deposited on the anterior and posterior surfaces of the teeth; but there are many persons whose teeth are quite free from tartar, although they never make use of a brush; and very frequently those who may have been habituated to copious precipitations, when they have overcome some chronic affection, and an improvement has taken place in their health, cease to have any of this unpleasant *mucus* deposited; at least it is in such small quantities, that the teeth are not disfigured by it. From these facts, the inference might be made, that large and habitual deposits of tartar are symptomatic of some disease of the system; and if practitioners would make observations on the different colours of this substance in various complaints, and also on its chemical differences, if any existed, the method of cure would be rendered much more simple and efficacious. Our own experience will enable us, without any premature decision (or anticipating the results to be derived from multiplied observations), to state, that in scrofulous and syphilitic disorders, the tartar has uniformly a peculiarity of colour; and in febrile cases, or during any derangement of the digestive and biliary organs, there is invariably a greater flow of saliva, and always a greater deposit of a dark kind of tartar, in some persons appearing only as a superficial stain on the teeth.

'In all local fevers, whether during the first or second dentition, there is a much greater quantity of saliva secreted than is required to keep the mouth properly moistened; or when we eat any thing very stimulating or acrid, a morbid action of the glands takes place, and until they recover their healthy state, cease to supply the quantity of saliva which is essential; and a sensation of dryness of the mouth is felt, attended with much thirst.

'We have observed, that the tartar, whilst it is held in solution, seems to be intimately mixed, and in some instances quite saturated, with the saliva, which, undergoing decomposition, the evaporation of the fluid particles passing through the lips, prevents the aperture between them from closing (performing the same office as the tears do to the eye-lids). It is during this process that the tartar, from its own specific gravity, becomes deposited on the surfaces of the teeth. It insinuates itself on every part; and, although a portion of it is removed during the process of mastication, yet between the teeth, and at the lower parts of the necks, where they join the gums, it remains and hardens, until the continual deposition of "stratum super-stratum," renders it visible to the eye of an observer. By its mechanical pressure on the gums, it forces them from the alveolar processes, which, on being exposed to the action of the atmospheric air, undergo a rapid decomposition; and the teeth,

from thus losing their bony support (the sockets), become so weakly attached that they soon drop out; the gums are very foetid and spongy, and so tender that they bleed on being touched. What must always be a subject of much regret to individuals who lose their teeth from a great accumulation of tartar, is, *that no decay may have taken place in any of them.*

‘To obviate these unpleasant and injurious consequences, the greatest cleanliness should be observed. If a brush alone will not keep the teeth clean, testaceous powders, with any of the alkaline earths, will be of great assistance in removing the tartar without leaving any injurious effect, as they only act mechanically; but in most advertised tooth powders there is an acid of some kind, which, although they give a transient beauty to the teeth, many bad effects are sure to follow the use of them. If there exist any predisposition to the disease called *caries*, the acidiferous powders are very likely to produce decay, as they remove portions of calcareous earth every time they are used.

‘But when all these precautions cannot prevent a deposition of the tartar, recourse ought to be had to a surgeon-dentist to remove it whenever its accumulation renders it necessary. This operation, which is termed scaling the teeth, has been considered (but without the slightest foundation) to be injurious. It must be more so to have a hard extraneous body, which the tartar ultimately forms, remain undisturbed, and covering, with an unseemly yellow incrustation, a substance so very beautiful and ornamental as the enamel of the teeth. Those who suppose the hard deposited tartar to be harmless, might with as much reason contend *that dirt upon the face*, in alternate layers, would not be injurious. To our medical readers, we need not give any illustration; but those who are unacquainted with the origin of many cutaneous diseases and eruptions on the head, hands, face, &c., may be somewhat surprised when they are informed, that many of these diseases, peculiar to the lowest classes of society, arise generally from great uncleanness.

‘Experience, therefore, proves the operation of *scaling the teeth* to be essential for the health of the gums, and the preservation of them also; and it is never attended with unpleasant consequences if the dentist makes use of the proper instruments. But too often *muratic acid* has been substituted by pretenders to dental surgery, either from an ignorance of its fatal consequences on the teeth, or for the ease with which it removes the tartar; but the temporary whiteness is soon followed by a dark and unpleasant appearance of them—they are very tender and sensitive, and are rendered very liable to decay; whilst the simple and useful process of scaling the teeth is to remove mechanically the adventitious covering from them, and no danger can possibly result from such a cleanly act. When, through great neglect, there may be a vast and solid encrustation to be removed, a small quantity ought to be taken away at different times; for, after such a solid case of tartar (if too suddenly removed) is taken from the teeth, and the patient goes into the air, it is probable the cold may affect them; but if the precaution was

observed of washing the mouth with a little spirits, it would effectually prevent the cold air from producing any unpleasant effect.

‘ Many writers on diseases of the teeth have recorded cases of such extraordinary deposits of tartarous mucus, that, although the persons have used the brush twice a day, at the end of six months they have been obliged to have recourse to a dentist. It is from having had many similar cases, that we have ventured to remark, that this unnatural and unusual secretion may arise from some diseased action of the absorbents, or a morbid affection of the glands themselves, for the saliva of such patients is capable of oxydizing metals very rapidly.

‘ The great accumulation of tartar during a mercurial course, it is unnecessary to describe, as it would only be a repetition without any further demonstration ; its effects on the gums we shall notice when treating of the diseases peculiar to them.’

We have said enough of this production, or we might be tempted to speculate on the probable effects of one of the recommendations of the author, founded on his views of the importance of the saliva ; for, imagining apparently that it is not generally secreted in sufficient quantity, he advises his ingenuous readers to excite the action of the salivary glands when eating ‘ by moving the jaws as much as possible.’ But although it may be amusing to point out such examples of absurdity, we should not for this purpose only have departed from our usual plan of extracting chiefly what is valuable from the works that come before us. It appeared to us, that the tone of ultra-piety adopted in the pages we have just inspected, was not only offensive to good taste, but highly unfavourable to the production of any serious, or even any rational views of the kind evidently desired by the writer. We were also instigated by a sense of duty to offer a sort of remonstrance in this way to the seven physicians and nine-and-twenty surgeons under whose patronage a work of this character has been added to the literature of our profession.

III.

DISEASES OF THE SKIN.

Traité Théorique et Pratique des Maladies de la Peau. Par P. RAYER.
Tom. I. Paris, 1826.

A Practical Treatise on Diseases of the Skin, &c. By SAMUEL PLUMBE,
Member of the Royal College of Surgeons. London, 1824.

A Practical Synopsis of Cutaneous Diseases. By THOMAS BATEMAN. London, 1819.

THE diseases of the skin are so multiplied in their appearance, and so little capable of being recognised by mere verbal

description, that it is impossible to enter into any very satisfactory detail within the limits of a review. It has, however, appeared to us, that a material deficiency exists in all the works which we have placed at the head of this article, viz. the omission of an essay, in which the general principles upon which all skin diseases should be treated, are laid down somewhat at length. The works do indeed contain much of the material for such an essay; but it is manifest, that the effect upon the mind of common readers must be very different when these principles are exhibited as general guides of practice, and when they appear merely to be inculcated in some individual forms of disease. Dr. Bateman's system of arrangement being exclusively founded upon the external characters, is incapable of affording the slightest hint as to the real nature of a cutaneous disease, or its mode of treatment; yet upon the whole, his Synopsis is the best work that has yet been published,—and with such an introduction as we have mentioned, it appears doubtful to us if it could be amended. Mr. Plumbe, adopting the nomenclature of Bateman, has attempted an arrangement upon a different principle; but which it requires but little acquaintance with cutaneous diseases to recognise as at least premature. His first section is entitled, 'Diseases which obtain their distinguishing characteristics from local peculiarities of the skin;' and under this head he ranges acne, sycosis, and porrigo scutulata; but rejects the other species of porrigo and the papulæ. On this last subject, indeed, he appears to us much more positive than he ought to be in rejecting the existence of papilli, 'except those wherein the senses of touch and taste reside.' We were taught that that state of the skin which has been called goose skin, depended upon a peculiar condition of the papilli of the cutis; and we can yet see no reason to believe our instructors mistaken. Neither do we feel so secure as Mr. Plumbe appears to do, that the different species of porrigo are dependent upon entirely different causes. The second and third section of his division are certainly not well defined in nature; but the fourth, 'on diseases marked by chronic inflammatory action of the vessels producing the cuticle,' under which head, lepra, psoriasis, and pityriasis, are ranged, is altogether hypothetical. That the part secreting the cuticle is disordered, is clear; but that the disorder is of the nature of a chronic inflammation, is extremely doubtful. We are disposed to assent fully to the opinion of M. Rayer respecting the merits of this classification, viz. that though ingenious, it is much inferior to that of Willan and Bateman.

The volume published by M. Rayer is only the first part

of a larger work, and embraces the several orders of exanthemata, bullæ, vesiculæ, pustulæ, papulæ, and tubercula. The latter order is subdivided, for the purpose of separating the furunculus from elephantiasis. The same remark which we have made regarding the arrangement of Mr. Plumbe, applies in some degree to that of M. Rayer. He considers all these forms as different species of inflammation, as exanthematous, bullous, squamous inflammation, &c.: it has, however, this advantage, that by subjoining the epithet he distinguishes the diseased process from common inflammatory action. After all, we are of opinion, that the synopsis of Bateman is still the best work on the subject. The descriptions are much more precise than the other,—and, with few exceptions, equally accurate: indeed, where there is difference in opinion between this and later writers, there may be much question which is correct.

In laying down the principles upon which any particular class of disorders is to be treated, it is impossible to omit the consideration of those structures in which they are observed. In the present case, however, we need not dwell long upon this part of the subject.

The general appearances of the skin, and its peculiarities in different parts of the body, are too well known to require any description. That, like every other structure of the animal system, the cutis consists of blood-vessels, nerves, and absorbents, no one at this time of day will for an instant question. But one inference may be drawn from this fact of some importance in the management of cutaneous disease, viz. that the connexion thus existing between the skin and the nutritive system, must render it dependent for its healthy condition upon the due performance of nutritive functions. That the skin also is liable to inflammation in all its varieties, and to all other diseases originating from irregularities in the action of the vascular system, is not only deducible from theory, but matter of daily and hourly observation.

The cutis is covered by the cuticle, which is a mere secretion of the cutis or true skin. According to the minutest anatomical investigations that have been instituted, the cuticle is altogether void of organisation. What also is curious is the total absence of pores in this layer. The following observation of Cruikshank is said by Dr. Gordon to agree accurately with the results of his own investigation:—

‘ When a piece of cuticle falls off from the cutis, some of the hairs go with it, and some remain with the cutis. Those hairs certainly perforated the cuticle, yet in the microscope not the least vestige of these perforations can be traced. In places where the hairs either do not exist, or where they are invisible,—where, how-

ever, the pores are very numerous, as on the nose, and some parts of the external ear, no perforations can be traced in the separated cuticle, though the sebaceous matter could formerly be pressed from the cavities of these pores on the nose, in the form of a small worm of considerable length. I perforated pieces of cuticle with a fine needle; but these perforations were invisible in the microscope, as they would have been, had I perforated the elastic gum.*

In the arrangement which Mr. Plumbe has proposed, we find the proper indications of treatment; and the objection to the arrangement itself, is not because cutaneous diseases are not dependent upon constitutional and local causes, but because all such diseases have, in a greater or less degree, their origin from both.

In considering the general application of remedies to the cure of this class of disorders, it is always the first object to ascertain the state of the alimentary canal. There are very many cases of cutaneous disease in which the health is sufficiently good for the patient to pursue all his ordinary occupations, in which he is scarcely sensible of any inconvenience, beyond that arising from the local affection; and yet an attentive examination of the state of the *primæ viæ*, as indicated by the state of the tongue, by the nature and frequency of the evacuations, a hard and tumid abdomen, &c., discovers considerable disorder in the digestive functions. Now, however slightly this disorder may be, it appears to us the very acme of bad practice to recur to merely local remedies while it exists; and as there are very few, if any, cutaneous diseases unattended by disorder of the alimentary function, it follows, that in very few can we expect success from topical applications only. Dr. Wilson Philip, in his work on Indigestion, has remarked with singular accuracy, that the organic affections consequent to the disease of which he particularly treats, are generally situated in distant structures; and that though the origin may be traced to complaints in the stomach or bowels, the morbid change of structure will more frequently be discoverable in the brain, the lungs, or the liver. It is precisely this circumstance that appears to happen in the diseases of the skin. The skin is the organ upon which the effects of irregular or unhealthy nutrition are shewn; and thus some more important organ is protected from injury. But if the brain be affected in consequence of indigestion, to correct the digestive process is a necessary part of, though not all the treatment: for if any long time shall have elapsed,

* It is right to state, that in the present paper the treatment of febrile cutaneous diseases is in no way considered. It is known to all, that the fever alone requires attention; the eruption is a mere attendant of the fever.

remedies must be resorted to that act more directly upon the disturbed function. Thus, headach, giddiness, numbness in the extremities, may all be primarily owing to indigestion, taking this word in the extended sense appropriated to it by Dr. Philip; and yet bleeding may be absolutely necessary to prevent irreparable mischief in the brain. But though depletion be thus called for, it is well known to every observant practitioner, that much more is required altogether to overcome the cerebral affection: for it is not enough to remove the immediate danger, the primary excitant must also be removed; and as this is situated in the stomach and alimentary canal, to these organs a great portion of our attention and care must be directed. Pursuing the analogy, as far as it is allowable in cutaneous diseases, we have equally indications of local and constitutional treatment. But we have also a peculiarity arising from the nature of the affected structure, that points out a most important modification in the management of its disorders. In case any vital organ is attacked, subsequent to indigestion, it is quite clear that this secondary affection, being the most serious, must be first treated; for there is more danger, at least more immediate danger, to be apprehended from this than from the most protracted and obstinate indigestion. The skin, however, is not only not a vital organ, but is frequently artificially excited to diseased action, for the purpose of removing disorder from vital organs; and it is known to every old nurse in the kingdom, that the disappearance of eruptions is frequently followed by some dangerous if not fatal malady. The local disorder, therefore, when the skin is affected, must be last considered, instead of first, as in the former case, because the original excitant remaining in full force, the skin may indeed become healthy, but at the expense of some vital organ. Here, then, the reverse practice to what a judicious physician would follow in affections of the brain, lungs, &c. must be pursued, and the constitutional symptoms are more to be regarded than the local. The local appearances are in all such instances probably what many French and German practitioners think all cutaneous diseases, true prophylactics. It is dangerous to regard them in any other light.

It being then manifest, that the first object in the treatment of cutaneous disease is the correction of the constitutional disturbance, it will not be misplaced to consider the degrees and varieties of such disturbance, and the plan best adapted for removing it.

The constitutional derangement upon which these eruptions depend is certainly most intense in children; and at the same time, both the primary and secondary disorder are

for the most part more easily curable than when they are found united in adults.

Children who are much fed, and they are very few to whom more is not given than is consistent with the healthy action of the alimentary canal, are peculiarly liable to cutaneous disease, particularly to the different varieties of strophulus and the porrigo larvalis. The abdomen in these patients is almost always tumid, and the evacuations from the bowels are very irregular and offensive. Both the colour and the consistency of the fæces are subject to great variety. They are white, slate coloured, covered with thick glairy mucus, and much relaxed; or, on the other hand, the portion which is first expelled is a hard lump, and much pain is experienced in expelling it,—while the latter part of the evacuation is as much broken down as though strong purgatives had been given; and this happens when no medicine whatever has been administered. To this state of the abdomen are frequently added all the symptoms of infantile remittent fever, with occasional pain in the bowels, or tendency to cerebral affections. Excepting, however, the eruptions are *very extensive*, in which case they have frequently appeared to us to react upon the constitution, and to aggravate the disturbance in the digestive functions, the presence of cutaneous disease is a real counter-irritant; and the abdominal or cerebral affections make little progress. It is thus, that in the porrigo larvalis many patients suffer for months without any farther inconvenience than what the local complaint produces; but if the eruption be cured by external applications, to which sometimes it yields very readily, the symptoms of hydrocephalus or marasmus become instantly serious.

It is a remark of Goelis, to which we have had frequent occasion to refer, that almost all the diseases of children are inflammatory in their nature; and the remark will be confirmed by every experienced practitioner. Now this tendency is very observable in children who are afflicted with any eruptive disease. There is in most instances slight tenderness in the abdomen, and though this tenderness is not so severe as to interfere much with the amusements or habits of the patient, it is a frequent subject of complaint. Should the eruption by any chance retrocede while the bowels are in this state, it is no unusual circumstance for peritonitis or enteritis to ensue in an active form. As a precautionary measure, therefore, we should always recommend the application of a few leeches: but, in truth, leeches are of more service in these instances than merely as preventives, for they much facilitate the correction of the digestive functions. It has frequently happened within our knowledge, that the fæculent evacuations

have remained excessively offensive, notwithstanding the continual employment of purgatives; and this offensiveness has been present when calomel had not been given for some days. (We mention this last fact, because we are aware that some practitioners believe that calomel will produce the unhealthy odour. For reasons which we will give presently, we have no such belief.) There has, however, been a decided improvement in this respect after the application of leeches; and medicines generally have acted much more favourably.

Even, however, when there is no tenderness, and the abdomen is hard and tumid only, local depletion has often, in our experience, proved highly beneficial. This has been particularly the case with respect to that state of the lips which is termed *psoriasis labialis* by Dr. Bateman. The lower lip is generally most affected, and is swelled, often deeply indented with fissures, and covered with a dry scale, which perpetually peels off, and is as repeatedly reproduced. According to the ordinary observation, we believe, of most medical men, few local affections are more obstinate or more inconvenient than this. During the last summer, a case was presented to our notice which had existed for several years, and had resisted every remedy that had been employed, though all the most eminent men in London had been consulted regarding it. We have at this time under our care a young girl in whom it has endured for three years, and is now gradually yielding. No impression was made upon this last case, till blood had been taken away by leeches. The abdomen was hard, but not painful; and each application of the leeches was followed by decided improvement in the condition of the lip, the abdomen at the same time becoming much softer. It is now in a more healthy state than it has been since the first attack.

M. Rayer speaks very decidedly of local bleedings, not from the abdomen, but from the affected parts of the skin. 'I have derived,' he says, 'the most striking advantages from it in eczema, psoriasis guttata, tinea mucosa, prurigo,' &c. There is no question but that, in very many cases, local depletion is highly beneficial; but we shall leave the more general consideration of it, till employed upon the subject of topical remedies.

Continuing the subject of constitutional treatment in the eruptive diseases of children, we may observe, that tonic remedies are not only seldom called for, but are really very seldom allowable. The medicines which at all times appear most useful are purgatives and aperients. In the choice of these last we are frequently much confined by the difficulty of inducing children to take physic at all. The most appro-

priate purgatives, however, in the first instance, our own experience would lead us to conclude, are jalap and calomel, but it is in the first instance only. The custom which some parents have of exhibiting calomel on every occasion, because it has neither much bulk nor taste, is decidedly injurious, and frequently disorders the bowels to a dangerous extent. Children thus treated become fretful, emaciated, subject to painful tenesmus, and not seldom fall into a state of complete marasmus. Unless, therefore, the specific effect of calomel is wanted, we do not think it an advisable remedy. This however is generally the case in the abdominal diseases of children, for in a very great majority of such patients the biliary secretions are evidently disordered. At the same time, it must be added, that calomel and jalap act more efficiently as purgatives than either of them alone, and expel more effectually any scybala that may be lodged in the cells of the colon, than any other medicines.

It has been mentioned, that calomel is thought by some individuals to produce that offensive odour in the fæces which is often observed to follow its employment, and that the green colour of the evacuations, which are so generally considered as diseased secretions, are necessary consequences of its use. The former opinion is assuredly incorrect; for if true, then the offensive odour ought to remain as long as calomel is given, even if it should not become more intense. But the fact is decidedly otherwise. Let any one give calomel in such quantities and at such intervals, as that the bowels may be evacuated between each dose of the medicine; the first part of the evacuations will be offensive, and the last will scarcely have any odour whatever. We have verified this observation repeatedly. With respect to the colour of the fæces, the opinion above referred to is correct. If calomel be given merely as a purgative, and discontinued, no alteration is observable in the colour of the fæces, in many instances; but if persevered in, the green appearance takes place, and remains till some little time after the calomel has been suspended.

We have sometimes given calomel as an alterative to children, in the proportion of two grains every second or third night. The hydrargyrus cum cretâ, however, is a much milder medicine, and affords all the benefit that can be derived from calomel as an alterative. Active purging can neither in these nor any other diseases be long continued with impunity. It should be always remembered, that purging is the result of irritation of the mucous coat of the intestines, and that the repeated application of irritants to this, as to any other structure, may excite some serious disease, must induce much functional

disturbance. The object, therefore, of purging is merely to unload the bowels of their contents, and this having been effected, drastic medicines should be entirely withdrawn. After this has been done, recourse should be had to mild aperients, with the occasional intervention of a more active purgative. Not unfrequently we have seen considerable improvement in cutaneous diseases ensue from small doses of the sulphate of magnesia, after all the hardened fæces have been expelled. The salt has been given so as to induce two or three relaxed but not copious evacuations two or three times daily, and persisted in for a week or two, according to circumstances. If persevered in too long, and whenever tenesmus supervenes, this must have happened, the digestion is weakened, and a weak infusion of chamomile may then be administered with advantage. Aperients should always be continued till the evacuations emit the healthy odour, for till then, alterative or tonic medicines invariably do mischief.

An equally important part of the treatment of children in cutaneous affections, is the regulation of the diet and regimen; for we do not hesitate to affirm that nine-tenths of this class of disorders are the result of improper living; sometimes the kind of food has been injudiciously chosen, very often too large a quantity has been given.

When the eruption appears upon children who are still at the breast, there is much reason for believing that the mother has indulged improperly in her diet, or that she has been little careful of regularity in the periods of suckling. These, therefore, are the circumstances to be attended to in the porrigo lactea and the different species of strophulus, which are generally curable by mild and occasional aperients, if no error is committed in the usual management of the patient.

In older children, the error far more frequently consists in the quantity of food that they are permitted to take than in the quality. A few days ago, we were called to a patient who was evidently labouring from overloaded bowels, and assurance was given that the child had not eaten much. A little more accurate investigation proved that this was true only so far as animal food was concerned; the patient had had very little meat; but to compensate for this, he had been suffered to stuff as long as he pleased with a flour pudding. Among the poor also, ale and spirits are often given, and thus a foundation is laid for more important disorders than those of the skin. It is perfectly certain, however, that if the errors of this kind cannot be corrected, there is no chance of curing a cutaneous affection without hazarding the health of some vital organ.

Want of cleanliness, again, is another source of these diseases, and this, in some cases, is an error of system. Of the *porrigo lactea* it has often occurred to us to meet instances in which the head was never washed, because some old nurse had said that to wash the head would injure the brain so long as the skull should remain unclosed. The consequence of this 'old wife's tale' may be well conceived. The scalp is covered with a thick crust of dirt and desiccated matter, and its appearance is truly frightful. We would, however, make some remark upon the common mode of washing children, and which we feel certain, from much observation, is one cause of their great liability to cutaneous disease. Soap is almost constantly employed, and this in no sparing quantity. Now soap is evidently stimulating, and the alkali it contains often seems to destroy the natural softness of the cuticle. As if the common soap were not sufficiently irritating, soft soap is often used, and more stimulating applications are thus made daily to the delicate skin of an infant than are ever deemed requisite in maturer age. The result of this usage is often a dry and harsh state of the cuticle, or a species of *pityriasis*, and upon the scalp the eruption of numerous *psyracious* pustules. We do not speak now from mere hypothesis, but from long and repeated observation. Many times have we succeeded in curing the *porrigo lactea* by withdrawing soap entirely, and enforcing the necessity of washing eight or ten times a day with warm water alone. That we might appear to do something, and induce constant attention to the other directions, some bland oil has been ordered to be rubbed upon the scalp after each washing, and the friction thus induced has probably been advantageous. Soap is not often required to preserve perfect cleanliness in children.

The observations hitherto made have had a reference principally to the management of these diseases in very early life, because they are then most common, and require some peculiar modifications in their treatment. We have not yet spoken of topical remedies, because we shall consider them after stating something of the constitutional treatment to which adults should be subjected.

Generally speaking, the dyspeptic symptoms in adults are much less manifest than in infants, and their diseases are much more unmanageable.

When cutaneous diseases occur in maturer age, it is not unusual to find the patients altogether deny that they experience any disturbance in the digestive function, and it is very true that the dyspeptic symptoms are in such individuals usually very slight. From this cause it has arisen, we appre-

hend, that local remedies have been almost exclusively referred to in chronic diseases of the skin, and of course that the treatment has been unsuccessful.

The prominent symptom in most persons is irregularity in evacuating the bowels. Sometimes the dejections are passed every day, but the fæces are hard and dry; at others the intervals are one, two, or even three days between each operation. In such circumstances, the tongue is always more or less furred, but in the morning, on first waking, it is particularly uncomfortable. There are, however, some individuals who have no unpleasant sensation in the tongue, though the papilli are always white. The spirits are subject to great depression, and though not absolutely incapable of following their usual occupations, many individuals are more easily tired than when in health. The constitutional symptoms are, generally speaking, little attended to by the patients themselves, and the eruption is alone the object of their complaint. It would lead us into all the peculiarities of indigestion, were we to enter into a detail of the functional disturbance which accompanies or excites cutaneous disease. We will, therefore, only repeat, that we have never seen any such malady unattended by indigestion; and stating so much, it is altogether unnecessary to speak at any length of the constitutional treatment. Every part of the system that is found in a disordered state must be attended to; every secretion must be regarded as necessarily tending, accordingly as it is healthily or unhealthily affected, to the removal or the maintenance of the diseases of the skin. The perspiration should be natural, or if suppressed, proper remedies should be applied to reproduce it: the urine should be both copious and precipitating matter only after it has stood several hours; for whether it is turbid when passed, or becomes so quickly after, it is equally manifest that the secretion is unhealthy. That the bowels should be attended to, need not be mentioned; for the error now is to keep up in every patient a continued purging, than which nothing can be more injurious. It does indeed sometimes happen that eruptions disappear, while the bowels are extremely relaxed, but they as certainly return when the purging is checked. In such instances there is no cure of that state of the system upon which the original disease depends, but the irritation of one organ removes the irritation of another. To employ a word adopted by the new French school, from former times, there is a derivation, and the diseased action is transferred from the external skin to the mucous coat of the intestines; and if this latter should not be excited into a state of chronic disease, the eruption reappears so soon as the

derivation is discontinued. It is a state of indigestion to which the diseases of the skin are attributable; and it should be always remembered, that the bowels may be relaxed as well as constipated in indigestion. The indications therefore are to restore all the functions to a natural state, not to stimulate one set of organs to an excessive action, while the action of others is diminished.

It may be asserted as commonly true, if not entirely so, that eruptive diseases always disappear when the digestive organs recover their healthy state. But though this is correct, it very frequently happens, that the local irritation reacting upon the digestive function maintains and aggravates the very disorder to which it owes its origin; hence, therefore, is derived the necessity of local applications, which by soothing or stimulating, as circumstances may require, diminish the effect of local irritation on the general system. The choice of such remedies was, however, till within the last few years completely empirical, and they were employed not according to any known rule, but according to the names by which individual diseases were known.

The topical management of cutaneous diseases at all times requires the utmost caution, not merely from the danger of repelling the eruption, and thus exciting more serious internal disorder, but from the danger also of aggravating the malady of the skin itself. In the numerous forms of impetigo we have generally specimens of inflammatory action, varying from the lowest possible state of chronic inflammation to an activity approaching the acuteness of phlegmon or erysipelas. According, however, to ordinary experience, the phlegmonous inflammation predominates, and large abscesses occasionally form when the disease attacks the hands.

After having properly attended to the constitutional symptoms, or rather while yet attending to them, the local affection should be only fomented, and whether there should be much heat and redness or not, this plan will be always advantageous. A poultice is very commonly recommended under such circumstances; but the necessary weight and the accumulation of heat have sometimes appeared to us injurious. It is, nevertheless, the only and the best substitute for continual fomentation, which, while it keeps up a constant perspiration from the skin, in no ways irritates by an incumbent weight. The different forms of impetigo, when the constitutional derangement admits of easy correction, are perhaps very readily curable; for when the inflammation is subdued, they admit of and quickly yield to highly stimulating applications. The *unguentum hydrarg. nitrati*, rubbed down with an equal

or one-third its quantity of cetaceous ointment, has, under such circumstances, seldom failed us; but this has only been when the digestive functions were easily restored. In many other diseases, such as acne, to which Dr. Bateman has prescribed stimulants, the same plan is demanded; the soothing system must be first resorted to, and the stimulating, when no danger exists of active inflammation.

When speaking above of local blood-letting in the constitutional treatment of cutaneous diseases, we slightly referred to M. Rayer's opinion respecting the application of leeches to the affected parts. Our own experience, which we ought to state has been limited, certainly corroborates his opinions. The question, let it be remembered, however, is not now, whether topical depletion is useful in acute, but in chronic diseases of the skin. In the former, no doubt can exist, nor perhaps has at any time existed since medicine deserved the name of a science, when in such cases blood would not have been drawn. The only diseases in which we have ever employed leeches without the presence of some manifestly inflammatory action, are prurigo pudendi and porrigo labialis. The former disease is generally accompanied with great heat and redness in the affected part, and the patients are reduced to a state of complete misery. Cold applications often aggravate rather than alleviate the itching, and fomentations have at least no beneficial influence. In several instances that have fallen under our care, the subtraction of blood has been followed by immediate relief, and for some time after the prurigo did not return in any degree equalling its former intensity. The torment of this is generally so great, that women, when they have once complained, will submit to any measures that may be advised, and there is therefore less difficulty in applying leeches to the vagina in these cases than might be anticipated. The relief afforded in porrigo labialis has not in our trials been very decided; but there are states in this disease in which we are inclined to believe it would be serviceable;—we mean, when the lip is much swelled and hot, and much pain is experienced.

The general rule, then, to be followed in the choice of topical applications to cutaneous diseases, is exactly the same as in any other local affection. We recur to sedatives or stimulants as the circumstances of each particular case may demand; but no little obscurity has been cast over this subject by the numerous preparations that have been recommended at different times: for they have never, or at least seldom, been employed upon principle, but upon the supposition that they have some specific effect upon the surfaces to which they are applied. That, however, no such specifics exist, we have at

least this ground for believing, to wit, that how much soever a particular ointment may have succeeded with one practitioner, it has totally failed with others. Thus, for instance, Professor Hamilton says, that the unguentum ad scabiem of Banyer has seldom been unsuccessful in his hands in effecting the cure of porrigo scutulata,—while Dr. Bateman 'has found it, like other applications, sometimes successful, but frequently inert and useless.'

There is no other principle in the general diseases of the skin than what equally concerns the diseases of other structures. It may, however, be right to except the action of sulphur in curing scabies, and of mercury in removing the eruptions that succeed to syphilitic infection. At the same time, our readers need not be informed that other remedies than sulphur sometimes succeed in curing the itch, that there are eruptions scarcely, if at all, distinguishable from true itch, which yield to aperients and warm bathing; and that in the syphilitic eruptions, mercury has been by many individuals entirely disused, and yet the maladies have been overcome.

There is, however, a state of the skin which is neither referable in our minds to chronic nor acute inflammation, but in which the perspirative function is almost, if not entirely, suspended, and the cuticle is perpetually thrown off in scales. This is the case in lepra and psoriasis; and probably these diseases are greatly kept up by this deficiency. Other affections, which are termed pityriases, are little curable by common stimuli; nor indeed can these be applied so universally as to comprehend the whole diseased surface, at least when, as is frequently the case, the whole trunk is included in the derangement. Recourse, therefore, must be had in these cases to frictions, and to warm vapour and medicated baths.

It has often appeared to us, that friction has not been sufficiently employed in cutaneous diseases, particularly when we recollect how useful it is found in other maladies. There can, however, be no hesitation in stating, that much of the advantage derived from ointments is referable to the friction employed in their application. This is especially the case in that dry condition of the legs which is often the sequel of old ulcerations, and sometimes exists when no ulceration has been present. The easiest plan of friction is certainly by means of the flesh brush; it is less liable to abuse than when it is effected by the hand only, and may more readily be rendered uniform. There is, however, much difference in the mode of applying it, when the hand is used, accordingly as the individuals have been accustomed or not to the employment. We have been informed, that the rubbers of Mr. Grovesnor, of Oxford, were remarkably steady and uniform,

and that friction could be continued very much longer without fatigue to rubbers, or inconvenience to the patients, than when other persons were the operators. The only caution to be given in using this remedy, is, that it be never recurred to when there is the slightest tendency to inflammation, for it will most certainly exasperate the inflammatory action.

Baths have been employed with a two-fold intention; the first having for its object the application of caloric, so as to soften the skin and induce perspiration; and the second being a mode of applying stimulating or other remedies more perfectly than could be done by other means to the diseased surface.

For the attainment of the former, dry, vapour, and warm water baths have been recommended. The immediate effects of the application of caloric are always stimulating; but the subsequent effects are debility, greater or less, according to the previous excitement. Under these circumstances, reference, in the application of warm baths, must always be had to the strength of the patient. In weak individuals they will induce great weakness far earlier than in robust persons, and this weakness may be difficultly overcome. The following is the report of experiments made by MM. Delaroche and Berger, upon a man placed in an apartment, the temperature of which varied from 150° to 190° of Fahrenheit's thermometer. The man experienced in the first instance a smarting sensation over the skin, which particularly affected the eyes, nostrils, and the breasts, the external veins swelled, the surface of the body became red, and its volume increased. *The skin was quickly covered with a profuse perspiration*, the pulse rose to 160 per minute. The respiration was anxious and difficult; and what was remarkable, the air expired lowered the thermometer. Headach, tinnitus aurium, and all the symptoms of determination of blood to the head, ensued, and which so much increased as to threaten a fatal result had not the individual been removed from the apartment. The body lost about half an ounce of weight in a quarter of an hour.

In the employment, however, of caloric in cutaneous diseases, no one would, even when it was applied locally only, permit so high a temperature as to produce these symptoms. He will bear in mind that his only object is to re-excite a healthy action in the skin; and for this purpose a bath from 90 to 96° of Fahrenheit will be quite sufficient.

With respect to medicated baths, our experience has not been very great, nor has it been very successful. We have never succeeded in curing any disease by sulphur baths, which had *much* resisted other remedies. Nevertheless, little experience has been had in this country of these applications;

and there have been some very favourable testimonies of their efficacy. We should certainly recommend their employment whenever common measures have failed.

IV.

ON THE SURGICAL PATHOLOGY OF THE LARYNX AND TRACHEA.

Observations on the Surgical Pathology of the Larynx and Trachea, chiefly with a view to illustrate the Affections of those Organs which may require the Operation of Bronchotomy; including Remarks on Croup, Cynanche Laryngea, Foreign Bodies in the Windpipe, Wounds, &c. &c. By WILLIAM HENRY PORTER, A.M., Member of the Royal College of Surgeons in Ireland, Surgeon to the Meath Hospital and County Dublin Infirmary, and to the Dublin General Dispensary; and Lecturer on Anatomy and Surgery in the Medico-Chirurgical School, Park Street. 8vo. Pp. viii.—283. Dublin, 1826.

Mémoire sur le Croup, chez l'Adulte. Par P. CH. A. LOUIS. A Paris, 1826.

THE object of Mr. Porter in this volume is to determine in what cases bronchotomy ought to be resorted to, and the period of disease at which it may be expected to be useful. His investigation, consequently, into the pathology and treatment of croup is confined to this point; and although, as he himself candidly acknowledges, there is not much novelty in his observations, the work, as containing the scattered information of many volumes, will be highly serviceable not only to students, but also to older practitioners whose opportunities of morbid examinations are not numerous.

The diseases of the larynx and trachea appear to have been long confounded under the general title of croup; and it was not till the year 1808, when Dr. Baillie described the cases of Dr. Pitcairne and Sir John Macnamara Hayes, that the affection now known as laryngitis œdematosa attracted the attention of professional men. In the mere medical part of the treatment this was not perhaps very important, because all the complaints are highly inflammatory, and require active depletion, (of course we now refer to the acute diseases); but the probability of assistance from surgery is much greater when the larynx only is affected. It will very seldom, however, happen that this limitation of disease will have place; and thus, though 'the respiratory tube must be liable to many idiopathic diseases, all of which will present shades of differences according to the structure originally attacked, they will resemble each other in all symptoms occasioned by simple interruption or derangement of respiration.'

* The idiopathic affections of the larynx and trachea falling

within this description, are acute inflammation of the mucous membrane occurring in the child, constituting croup or cynanche trachealis;—spasmodic croup, without the existence of inflammation;—inflammation of the submucous tissue of the larynx in the adult, or acute cynanche laryngea;—thickening of the mucous membrane, or chronic cynanche laryngea;—alteration of structure in the laryngeal cartilages, or phthisis laryngea;—sloughing and death of the cartilages;—and the pressure exercised by abscess or tumour in the neighbourhood of the wind-pipe obstructing the passage of the air.

Croup is the common term for every affection of the wind-pipe in which there is difficult respiration, with a peculiar shrill sound, and dry, frequent, and short cough. These symptoms may, however, be produced by very different states of the respiratory tube.

According to Mr. Porter, there are three species of croup, essentially differing in the appearances discoverable after death. 1st. Spasmodic croup, in which no morbid alteration is found, and which is often very suddenly fatal. There are, however, many exceptions; and we have known several young children,—and children are the principal objects of its attacks,—who have recovered from repeated invasions of the disease. In our experience, it has generally seized the patient in the night; and the peculiar croupy sound, protruded eyes, intense dyspnoea, and great anxiety of the countenance, have rendered for an hour or two the result of such attacks extremely doubtful. That in some instances it is merely a sympathetic affection of the larynx dependent upon disorder of the stomach, we have no doubt; and perhaps to this, at least in some measure, is to be attributed the great advantage of emetics. We have said in some measure, because though in spasmodic croup we have always found emetics useful, we have not always been able to trace any error in diet, or any consequent disturbance of the stomach. The disease is for the most part of short duration, but occasionally returns periodically at the same time for several nights together, the breathing in the interval being perfectly natural.

Spasmodic croup may, however, be the consequence of sympathetic irritation depending upon disease of the lungs. This seems to have been the case in one instance reported by Mr. Lawrence, in which, though the symptoms of obstructed respiration were most decided, and though relief was afforded by bronchotomy, no organic disease of the larynx was discovered. The only morbid alterations were in the lungs. It is manifest, that an operation will not often be resorted to for the relief of mere spasm in the glottis.

The symptoms of acute inflammatory croup, though very evident when the disease is perfectly established, are some-

times little manifest in the commencement. In the first attack of the disease, there is often nothing more than the common indications of fever. The child is shivering and hot alternately, restless, fretful, with a furred tongue, and loss of appetite. The dyspnœa is not unusually a later symptom; and we have even known two or three days elapse from the ushering in of the fever to the supervention of the shrill clanging sound of croup. Sometimes, however, when the child is old enough, it will complain of soreness of the throat, and shrink from very slight pressure upon the trachea. Upon attentively watching a patient when this happens, a slight noise is now and then heard, very recognisable as the peculiar sound of croup, but very low, and unattended with difficulty of breathing. As, however, the disease proceeds, the passage for the air becomes narrower, the noise in respiration more distinct, and croup in its most complete form is established.

The description of this state by Mr. Porter is very accurate, and he has very judiciously noticed the cerebral symptoms which are almost always present in the latter stage of this frightful malady. These symptoms are not, however, peculiar to affections of the trachea and larynx; but, on the contrary, very often ensue after a common attack of pneumonia in young children. Nothing is, indeed, more usual than the supervention of hydrocephalus to inflammation of the lungs, and certainly the concomitant phenomena are not always explicable upon the supposition of metastasis. Very few cases, indeed, occur where the breathing becomes perfectly unembarrassed, or even where there is any very decided amendment in this respect, though the cerebral affection may at the same time be much the most prominent. From this circumstance, we have frequently known very undeserved blame attached to practitioners, on the ground that they had mistaken the complaint,—while in truth there was only an additional disease. But when the explanation of Mr. Porter is considered, viz. that the disorder of the brain is the result of improper blood circulating through its substance, that thus its energies are impaired, and we have partial or complete stupor, interrupted only by general convulsion, we can much better understand the certain fatality of cerebral supervening to pneumonic disease. The general summary of Mr. Porter of the nature and progress of croup is so excellent, that we gladly employ his own language.

Acute cases of croup should be considered as examples of inflammation occurring in a particular structure, and tending to a certain given termination. The nature and uses of the organ of which this structure forms a part; the necessity of its functions being constantly performed, and the consequent impossibility of the

organ obtaining repose; the importance of these functions to life, and the nature of the parts which may be affected either directly or by sympathy, in consequence of the organic derangement, must all be taken into consideration in attempting to lay down a rational mode of treatment for this formidable disease. In the commencement the disease is incipient inflammation, and the indication is, to subdue this morbid action, and prevent the production of an artificial membrane within the larynx or trachea. The second stage is after the lymph has been secreted, and then (if we possessed the means) the object should be to procure an artificial passage for the air, which would afford the double advantage of preserving the lungs from congestion, and allowing repose to the larynx, whilst by the common process of nature the adventitious membrane might be separated and expelled. And the last stage of croup presents itself when the functions of the brain have become impaired in consequence of being supplied with an improper quality of blood, and of course all the energies of the animal machine are weakened in proportion. The result at this period must be fatal; for even if free respiration could be restored, the brain will not be able to recover, so as again to perform its healthy functions. — Of course, in conjunction with these measures, every care must be taken to remove irritation from the bowels, and to combat every accident which might even indirectly interfere with the recovery of the patient.'

The first part then of the treatment of croup is to deplete largely, and decidedly at once; for if antiphlogistic remedies are to be useful at all, they can only be so in the very outset of the disease. We perfectly agree, therefore, with the author in the propriety of inculcating general blood-letting, when this is possible either by opening a vein in the arm, or the external jugular. Next to blood-letting, our reliance would certainly be placed upon large and repeated doses of calomel. The effect required, however, from this medicine is its specific rather than its purgative qualities, though in the first instance it is truly desirable thoroughly to evacuate the bowels. But when this has been done, the calomel should be combined with a small quantity of opium, according to the age of the child. The difficulty of salivating children under ten years of age is well known to every medical practitioner; and Mr. Porter seems to us rather to underrate its value on this account. Independently, however, of this its specific action, calomel certainly has a remarkably beneficial influence upon croup; when there has not been the slightest appearance of salivation. We have often been tempted to believe, that its action here is the same as in *iritis*; for in both diseases there is a copious effusion of coagulable lymph. Now, whether salivation is effected or not, the combination of opium and calomel in the latter malady removes all complaint in the course sometimes of a few hours, the inflammatory redness subsides,

the cloudy appearance of the iris vanishes, and the pupil recovers its healthy state. But, to effect this, the medicines are given in large and repeated doses; how much more decided then ought we to be in the exhibition of this remedy in so fatal and rapid a complaint as croup? In our Number for December, an instance of the good effect of this plan was given, upon the authority of Dr. Conolly, of Tours.* In that case, five grains of calomel were given every hour for ten hours successively, at the end of which time the gums were slightly affected. It was continued then every two hours, and persisted in till the complaint was completely conquered. Yet this was apparently in the last stage of the disease, and a false membrane was expelled. Whatever, therefore, may be the *modus operandi* of calomel, there can be no excuse for neglecting its administration in very large doses; *for experience has proved its very great utility*. Nor should it be discontinued from the fear of its debilitating effects, for these are wanted above all others in inflammatory complaints; neither need the dread of diarrhœa or dysentery affect its suspension,—for these can be obviated by the addition of opium. But even were all these evils to occur, and were we to regard them as effects somewhat dangerous in themselves, we should not hesitate to push calomel to the utmost in this fearful disease. To act timidly, is to ensure the death of the patient; there is no hope but in the most decisively energetic practice. And it is moreover to be remembered, that the evil effects of calomel, either in the form of salivation, diarrhœa, or dysentery, are very rare,—while the termination of croup is fatal in a vast majority of cases.

Tartar emetic has also been given, so as ensure a continual state of nausea; and in some instances it appears to have been beneficial. It may perhaps be an useful adjunct to calomel. Supposing, however, that none of these remedies are successful in checking the disease, is there any hope in bronchotomy? and at what period of the disease may we expect it to be successful? The following reflections of Mr. Porter upon this subject are well worthy attentive consideration:—

‘The effusion of coagulated lymph is very generally confined to the larynx alone: but still in a number of cases the inflammation commences in the bronchial cells, and proceeds upwards in the wind-pipe. This is an affection in which an operation could not possibly be of service, and there is no mode of distinguishing accurately as to what has been the original seat of the disease. This one consideration must involve every case in obscurity, and

reader the success of an operation a matter more dependent on chance than on judgment. Again, if it be true that inflammation interferes with the functions of the bronchial membrane, and that the blood will be imperfectly arterialised when such disease is present, it will be of little consequence whether air be admitted or not; the brain will as surely be affected as if no artificial opening had ever been practised, and all the relief the patient will experience can amount to no more than a cessation of that extreme muscular exertion which is necessary to carry on respiration at all. I saw this admirably exemplified in the case of a little girl on whom bronchotomy was performed for the cure of croup: the disease had originally been confined to the larynx, but after the operation, the bronchial cells became affected, and the inflammation spread upwards nearly to the place in which the trachea had been opened. In this instance there was no deficiency of air: the aperture was much larger than the natural size of the rima glottidis, yet the patient had convulsions, exhibited every symptom of cerebral congestion, and finally died comatose.

‘In a disease that runs its course with such rapidity, it would be desirable to ascertain at what period the operation should be performed, and what are the symptoms that indicate its necessity. In the earlier stages, when the membrane is red and swollen, and no lymph as yet effused, there can be no object in making an incision, which will be much more likely to aggravate the disease than to relieve it. When the adventitious membrane has been formed, there is some reason to think that in the great majority of cases sufficient mischief has been already accomplished to render a recovery very problematic. The lungs have been already loaded with blood: perhaps effusion has been begun, and it may be, from the irritation it has undergone, that the mucous membrane of the bronchial cells has already taken on a disposition to inflammation. It may be that the brain has already become affected, for I have met with many instances in which the disease proceeded with such rapidity that no lymph has been effused, and yet the patients never during life showed any symptom that could mark a difference between the two cases. At the latter stages of croup, it would be absurd to think that an operation could possibly prove beneficial, unless it be supposed that a wound of the wind-pipe could remove cerebral congestion; and therefore whenever convulsions have occurred, or that the patient appears comatose or sinking, let no man undertake it as a last resource, for it is a resource that will avail him little, and after his patient's death he may esteem himself fortunate if a great part of the blame is not laid to the account of himself and his knife.’

The last observation of Mr. Porter in this extract is particularly deserving of attention at a time when every young surgeon believes himself capable of operating, and is naturally anxious to exhibit his acquirements. We do not, however, join in the caution, founded upon the obloquy with which a

surgeon may be assailed, because we cannot for a moment allow *this* to be a proper motive of action. Whatever may be the result to a practitioner, he is bounden by duty to act according to the best of his judgment, and to give even the last resource when it really is a resource. *Anceps remedium melius quàm nullum*; but let him be at least convinced that it is *anceps*, that there is some doubt, that a little, however little, chance may yet remain by the operation proposed, and not upon any vague surmise, unenlightened by scientific investigation, unsupported by rational deduction, to proceed upon a hopeless adventure. And we found our objection to this proceeding not upon the personal inconveniences that may ensue to the medical man, but on the disparagement thus brought upon valuable resources. For at all times the objection to operations is considerable among the great vulgar and the small; and both are equally unable or unwilling to permit their reason to act. It is thus that the most absurd deductions are drawn; and the very means of relief, even though they should be the only means, are really looked upon as the unalloyed instruments of evil. How often are we told, that 'I should not like this remedy or that, because it was tried with such a patient, and he died;' and yet by such wretched misconceptions as these, medicine is cramped in its exertions. It is, therefore, most important, that operations should be performed only when they have some chance of being successful: but if there is a chance, *then* whatever may be the consequences, the surgeon should allow himself no choice; he ought to operate.

The experience of Mr. Porter, and we are afraid that it agrees with the experience of every other surgeon of eminence, affords little encouragement to recur to bronchotomy in acute inflammatory croup. From the investigations of morbid anatomy, we might be prepared to expect this unfavourable result. For though it may happen, as in many of M. Louis's cases, that the disease may commence in the fauces, and thus extend to the larynx and trachea, this is not only not uniformly the case, and not only does the disease sometimes appear to begin in the bronchial cells; but under any circumstances it generally extends to them. Dr. Farre has related one case in which it was combined with pneumonia. In some of Mr. Porter's cases, the lungs were gorged with blood, and much firmer than usual; and in the instances of croup, in the adult in M. P. Ch. A. Louis's *Mémoire*, the lungs were the seat of disease,—mostly in a state of what the French pathologists have named pulmonary apoplexy, being gorged with blood, and sometimes highly inflamed. If, however, bronchotomy should be thought of in this disease, it should

unquestionably be performed early; and the circumstances by which we are to be guided, are the state of the brain and of the lungs. Should stupor have already come on, no good whatever can be expected from the operation; and to this the result of every case in which it has been tried bears ample testimony. It is less easy to determine the condition of the lungs; but if any dependence can be placed upon the stethoscope, its utility must be very great under circumstances of the kind now referred to. As a general remedy in the croup of infants, however, it is not very likely that bronchotomy will ever be received; but still the possibility of its affording relief should be kept in mind.

The acute disease in which bronchotomy promises to be most useful, is the laryngitis oedematosa. Of this complaint, Dr. Pitcairne and Sir John M. Hayes died; and its description by Dr. Baillie was the first notice of it in modern times. It consists in an effusion of serum into the cellular texture that connects the loose membrane of the glottis to the cartilages. The following account of the appearances in Sir John Macnamara Hayes's case, as related by Dr. Baillie, will best illustrate the morbid anatomy of the disease.

'The posterior part of the upper surface of the tongue was a little red, but the tongue was not increased in thickness. The tonsils and the velum pendulum palati were slightly inflamed. The epiglottis was much thickened, and stood erect, so as to leave the cavity of the larynx altogether uncovered. The inner membrane of the larynx was much inflamed and thickened, and there was a little thick purulent fluid in the sacculi laryngis. When the cut edges of the larynx, which had been slit behind, were brought in contact with each other, the cavity of the glottis was found to be almost obliterated by the thickening of the inner membrane of the larynx at that part. The inner membrane of the trachea was likewise inflamed, but in a less degree. The lungs did not collapse upon opening the chest, but they were sound in their structure.'

The characteristic distinction of this disease, according to Sir Gilbert Blane, is the difficulty of deglutition accompanying the obstructed respiration. The other symptoms are precisely such as might be expected from the nature of the affection. The breathing becomes more and more laborious. 'There is a peculiar sound caused by the air forcing its way through contracted apertures, which cannot be described, but which once heard can never be mistaken. It is harsh, sibilous, or whistling, accompanies each act of inspiration, and is less distinct, or perhaps wanting in expiration. 'To this are added excessive anxiety and restlessness, with a most painful sense of suffocation. Drowsiness, coma, and death, succeed.' In Dr. Pitcairne's case there was no 'particular noise, nor

any spasmodic character belonging to the breathing.' At five o'clock in the evening, when he was seen by Dr. Baillie, 'he was breathing with difficulty, and was a little drowsy, but his countenance was expressive of less distress. About eight o'clock in the evening he became suddenly worse, and in less than half an hour afterwards he died.' Dr. Pitcairne experienced an uneasy feeling in the larynx, and as 'his voice was almost lost,' he wrote down 'that his complaint was to be considered as croup.' In Sir John Hayes the symptoms were more violent, and he had had one attack fourteen years before, from which he was saved by very large depletion.

Although this disease is so rapid in its progress when once established, it seems more than any other likely to be benefited by the operation of bronchotomy. The morbid appearances have in all the cases been confined to the larynx, or at least whatever other alterations have been observed, seem to be fairly considered as secondary, and as originating from the laryngeal disease. But ~~if~~ ^{if} the operation should be performed very ~~early~~, and ~~before~~ the strength or the sensorium are much affected; for to employ the language of Mr. Lawrence—

'The impeded state of respiration causes a violent constitutional disturbance in the acute cynanche laryngea, while it has a general debilitating influence in the more chronic forms of the disorder; and these effects are in themselves fatal, after a certain time, even if the original obstruction be obviated.'

As to what may be expected from medical treatment without operation, little can be said favourable. In the first attack of Sir John Hayes, he was evidently saved by copious depletion; but if effusion has taken place, bleeding seems little likely to be serviceable. The only chance then left is the immediate recourse to bronchotomy. As an illustration of the great rapidity with which this malady runs its course, we copy the ensuing case from Mr. Porter's work.

'In the month of April 1816, a gentleman residing about sixteen miles from Dublin was attacked with what he considered to be a sore throat. He was a large man, very strongly made, inclining to corpulency, but of active habits, and moderate in the pleasures of the table. He might have been forty-seven years of age. He was taken ill in the evening with shivering, and an inclination to crouch over the fire, slight headach, pain in the throat, and a trifling difficulty in deglutition. He had some warm drink, and went to bed, but passed the night rather restless and uneasy; and when, towards morning, exhausted with watching, he had fallen asleep, he shortly awoke, in a paroxysm of suffocation. Still, when he had roused himself, the difficulty of breathing was not such as to occasion great

alarm: he complained of a dryness or huskiness in the throat, and was annoyed by a short cough, without expectoration.

‘ In the morning, an apothecary who resided in the neighbourhood was summoned; and by the time he arrived, the symptoms had advanced so rapidly as to become serious and alarming. The patient was bled, had purgative medicines, and a large blister was applied to the throat; but without the smallest relief.

‘ Happening accidentally to be in the neighbourhood, I was called to see him about four o’clock in the afternoon. His face was then pale and swollen; his eyes glassy and protruded; his breathing loud, harsh, and stridulous, and the efforts he made to carry on this function were frightful. His pulse very rapid, but not full. He perfectly retained his senses, and pointed to the thyroid cartilage when questioned as to the seat of his distress. He died in about an hour afterwards, twenty-one hours from the first approach of the disease.

‘ After a good deal of difficulty, I prevailed on the friends of the deceased to allow me to examine the windpipe, and permission was only granted under a promise that no other part should be interfered with. The lining membrane of the larynx appeared slightly inflamed, of a bright pink colour, but not thickened in structure. The epiglottis did not participate in the disease at all. The sub-mucous tissue was œdematous, so as to approximate the edges of the rima glottidis, and nearly close up the aperture. The larynx contained a good deal of frothy mucus, and its surface was smeared over with a yellowish glutinous substance, not very unlike diluted honey.’

Chronic cynanche laryngea, is used by Mr. Porter to designate all the diseases which proceed very gradually, and without exciting for a considerable time any suspicion of the dangerous nature of the malady. It is also to be remarked, that all the symptoms of difficult respiration may exist, without the structure of the larynx itself having undergone the most trifling alteration. In one case of this kind examined by the author, the only appearance of disease discovered after death, was ‘purulent matter surrounding the external surface of the entire windpipe.’

The simplest form of cynanche laryngea consists of thickening of the lining membrane of the larynx. The progress of the disease is not very rapid; and patients who have once suffered from an attack are exceedingly liable to a return of the disease. The symptoms are at first little more than hoarseness, generally attended with tenderness upon slight pressure over the larynx. In the first attack it will often yield to a few leeches and a blister, without evincing any unfavourable symptoms. In this, however, as in the asthmatic diseases of old people, every succeeding seizure is more severe and obstinate. If, as Mr. Porter remarks, it be in-

judiciously treated, it becomes extremely formidable, and the only remedy left is bronchotomy.

‘ This is the affection to which the name of chronic cynanche laryngea most properly belongs: it is that in which the operation of bronchotomy has been most frequently followed by fortunate results, and it is one in which it will always be successful if not delayed too long. The disease here is caused by a mere thickening of the mucous membrane, without any morbid alteration of structure; but the circumstance of the larynx being in constant use tends to maintain the action that is going forward, and, finally, if not relieved, to produce such a thickening of the part as will be incompatible with the maintenance of its functions. It is thus that creating an artificial passage for the air operates in promoting recovery, and there is some reason to believe that after the operation the powers of nature would be sufficient to work out a cure, even without the intervention of medicine, merely because the organ can enjoy repose. It is, however, a very rare occurrence for this affection to proceed to such extremity, unless it is allowed to increase through neglect, or is aggravated by injudicious treatment; and even without the operation, mercury will seldom fail in removing, or rather in relieving it; for when the membrane has been thickened to a certain extent, the voice is never afterwards perfectly recovered, and a considerable degree of hoarseness will remain, if not for ever, at least for a great number of years.’

Calomel, if employed early, and persevered in till the mouth is affected, will generally, however, prevent the necessity of an operation. The only other part of this volume which we can now notice, is the practice recommended when abscesses pressing on the larynx or the trachea render the breathing very difficult, and threaten even a fatal termination. That whenever this happens the abscess should be opened, will of course be the opinion and the practice of every well-informed surgeon. But not unfrequently the matter is deeply seated, or from the nature of the parts the operator may properly hesitate to proceed farther than the first incision. The plan advocated by Mr. Porter, is, in all such cases to make a deep incision in the direction of the matter, as in his experience the abscess always bursts in the course of a few hours into the wound. The following case illustrates the practice. It may be properly recommended to general adoption.

‘ Margaret Henessy, æt. 40. Admitted into the Meath hospital, June 19, 1826. Complains of a sense of suffocation, particularly at night: there is very little cough, but there is considerable soreness on pressing the thyroid cartilage and windpipe, and she has a sensation of something very foul coming up with her breath. The breathing is evidently oppressed, but not in the least degree sonorous, and there have not been any febrile symptoms.

' She had some aperient and antispasmodic medicines without relief, and on the 21st a slight fulness and œdema appeared on the lower part of the neck, nearly in the centre, and inclining to the left side; but there was strong arterial pulsation, evidently that of a large vessel, to be felt in that spot. There did not appear to be very great distress in respiration; but as she complained so much, and said she must be suffocated if something was not done, I resolved to attempt opening the abscess, which I was quite satisfied existed deeply in the neck.

' I made an incision along the central line of the neck, (of course avoiding that part where I suspected a large artery to lie), down to the trachea, which laid bare the three superior rings. Not a drop of purulent matter followed the incision, but she expressed herself relieved, and shortly after fell into a sound sleep, such as she had not enjoyed during several preceding nights.

' On the 23d I found that the abscess had burst into the wound, and there was a large discharge of very foetid pus on the poultice. On introducing a probe into the opening, it passed obliquely to the depth of three inches or more from the surface, apparently round the trachea, and behind it. Pressure on the lower part of the left side of the neck caused the discharge of a quantity of matter mixed with bubbles of putrid gas.

' This woman was discharged from the hospital quite recovered on the 20th July; but she complained for a long time afterwards of soreness in the throat, and difficulty of swallowing, in the situation the abscess had occupied.'

Some of the other cases we should be inclined to regard as examples of intercellular erysipelas.

In M. Louis's cases we do not find any thing particularly worthy of notice. They prove, however, that the occurrence of croup in the adult is not so rare a disease as is generally imagined. The treatment appears to have been most systematically inefficient.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ORIGINAL PAPERS.

1. *Practical Observations on Sloughing, and Phagedæna of the Genitals.* By B. J. NIND, Esq., Surgeon.

By phagedæna, I mean that action which imperceptibly dissolves or eats away its surrounding substance, contradistinguished from that morbid action, viz. sloughing, which destroys the original tex-

ture of a part, and converts it into a dark foetid substance, that afterwards falls off in an entire portion.

Local increased action is the proximate cause of both affections: I have not in any instance seen a well-marked cure of sloughing arising from diminished action, and am strongly of opinion that it never does; nevertheless, all surgeons with whose writings I am acquainted have hitherto expressed a different opinion. I admit, that weakly and irritable persons are frequently affected with these diseases; still, in such subjects there may be an increased or morbid determination to particular parts.

We know that in the last stage of sloughing, a part loses its action altogether; but it must be remembered, we are now speaking of the cause, and not the effect of the disease. Although in even an early stage the part affected may denote lessened action, yet that is merely the consequence of previous excitement; for it is well known that the exhaustion of vessels will *ever* be proportionate to their previous increased action above their natural or healthy state. In corroboration of this opinion, the parts in the neighbourhood of a slough will generally be found *very* painful, inflamed, and prone to take up that peculiar disease. What should our treatment be in this state of the parts? Should we adopt the stimulating system, and, by increasing the action of those vessels which are already too much excited, run the risk of extending the disease? or cause the separation of the already sloughed part by bleeding, and thereby diminish the morbid action in the neighbouring parts, and prevent the formation of new sloughs? That it is in our power to do this, I think will be satisfactorily shewn in this paper.

I have observed in all cases I have treated, that the pulse has been hard, and the blood taken from the arm has invariably presented a *very* buffed appearance. This was the chief inducement I had to carry phlebotomy to such an extent in Philips's case: he never (after the first time he was bled) felt exhausted from the loss of blood; on the contrary, he was always confident, and by his pulse *only* I could perceive the effect of bleeding, which was rendered full, and compressible. Mr. Fosbroke mentioned the case of a boy, of about fourteen years of age, whom he had attended about two months before with phagedæna, and whom he thought would certainly die of the disease, if he had not already breathed his last. According to my wish, he accompanied me to the place where the patient resided: he looked as emaciated and ghastly as any person I had before seen. He had lost nearly the whole of his penis; his body and face were covered with copper-coloured blotches; but Mr. Fosbroke (notwithstanding I had impressed him with my ideas respecting phagedæna and sloughing) was much surprised to find, on my directing his attention to the lad's pulse, that it was extremely hard and wiry; and he instantly observed, he would not hesitate to bleed a patient under almost any circumstances who had such a pulse. The ulcer from the phagedænic action was nearly healed; but it is worthy of remark, that the patient had a large ulcer on each thigh, which discharged a great quantity of matter. As the

phagedæna did not give way to any treatment until several days after these ulcers appeared, to their discharge we attributed the healing of the sore. Mr. Fosbroke was of opinion with me, that the boy would have much sooner recovered if he had been bled in the early stage of the affection; for every circumstance of the case renders it probable that bleeding would have affected that which nature was almost incapable of performing, and which was at last performed through the medium of natural discharges from the ulcers in the thighs. This patient, when under Mr. Fosbroke, suffered so much from *pain*, that he wished to commit suicide; and he derived more relief from the administration of *large* doses of calomel and opiate frictions than from the use of any other remedy. Although the first effect of mercury is that of a stimulant, it has often subdued violent inflammation of the liver; then why should it not be of service in other inflammatory affections? Probably its secondary effects on the secretions would be more than a set-off for its injurious action as a stimulant. If this view of the operation of mercury be correct, I should imagine that it would be most useful when given repeatedly in large doses, in order to cause ptyalism as soon as possible: however, I am not an advocate for mercury in this disease, nor do I think it should be administered while we have it in our power to bleed, excepting we give it in alterative doses with *other remedies*, to act upon those organs only which are concerned in the process of digestion, and thereby to improve the general health. From its action as a permanent stimulus, when given for some time in small doses, every function becomes deranged, and consequently the irritability of the part which is suffering from that irritating sore, a chancre, is increased, and sloughing is the consequence.

Sloughing and phagedæna are favoured by febrile and particular states of the constitution, and by several remote and occasional causes—unwholesome atmosphere, crowded apartments, and hot weather. I observed more cases of these diseases in the summer of 1825, than I ever before witnessed in private practice: it was extremely prevalent during the intense heat of that season.

Chancres on the generative organs of those persons who have repeatedly suffered from syphilitic ulcerations and conditions, are very prone to be converted into sloughing or phagedænic ulcers: a little irregularity in such patients will irritate the sore, and prevent the formation of healthy pus; for the power of resisting the disease being comparatively small to the morbid and increased determination to the part, its natural function or vitality easily becomes destroyed.

At present, I merely wish to shew the good effects of antiphlogistic measures in these diseases, instead of the stimulating system, which has hitherto been the practice among the most eminent surgeons. I conceive that it cannot be better effected than by inserting the cases I have met with,—since with me the former treatment has invariably succeeded; and the latter in one instance not only failed, but (it may be fairly presumed) increased, or kept

up the phagedænic character of the disease, as it did not give way until the cooling regimen was resorted to.

Although, from my own views and observations, I am led to believe that the treatment I am now recommending can be better reconciled to the remote causes which other surgeons have given of the affection, than that adopted by themselves, I will leave the investigation of that subject to a future period, and without farther detail give the results of my practice.

From the progression and termination of Williams's case (the first in this paper), I conceived that phagedæna should be treated as an inflammatory affection. Here was a person restored to health by antiphlogistic measures, whose constitution was much injured by the abuse of mercury: he was naturally of a spare habit of body, and now so weakened by disease, and irritable from the impression that he would either lose his life or his penis, as to be unable to walk across the room without difficulty. I formed an opinion, that, if in this instance they were found in a high degree beneficial, a practitioner would do well by treating other cases upon the same principles, although in opposition to the opinions of the best surgeons in Europe. However, it must be allowed, that such a person was not a very favourable subject for depletion; and if the practice succeeded in that instance, the chance of success would be greater in a person of a more robust constitution and plethoric habit. Yet much may be said on the weak side of the question; for if weakly patients are less able to bear depletion than those of full habits of body, the abstraction of a much less quantity of blood will produce the same effect on the vascular system. As this patient was excessively weak, I did not take blood from his arm, but the application of leeches produced the same effects on his pulse as phlebotomy would in a person of a more athletic make. I remarked it was softer after each application of the leeches.

The good effects of the depleting system were more evident in the sloughing disease under which Mr. P. laboured, than in any I have yet met with; and it may be well to remark, that so far from his constitution being good, he had, from the time he was fourteen years of age, been repeatedly affected with the venereal disease. He nearly lost his life about twelve months prior to my seeing him, under an eminent surgeon. A black spot having appeared on the penis, he was thought so far past recovery as to be allowed to take whatever he wished. He took brandy in such a quantity as to make him insensible for two days: the spot, however, separated, coming out, as he described it, 'like a worm from a common eruption of the face,' or rather like coagulable lymph. The above stimulant was allowed him (according to his account, which, however, is somewhat doubtful) more from the consideration that it would alleviate his sufferings, than that it would exert any influence over the mortification. *Quære*—was his recovery to be attributed to the primary stimulating effect of the brandy, or to its secondary effect upon the circulation? As the exhaustion of blood-vessels

will ever be proportionate to their previous excitement, I will give it as my most decided opinion, that he recovered in consequence of having been rendered powerless for two days, by the immense quantity of spirit which he fortunately drank; and more especially as the sloughed part did not separate until that extremely languid feeling was produced. It is also reasonable to infer that bleeding would have had a quicker effect than the spirit produced, and that had it been resorted to, he would have recovered much sooner.

I think the secondary effect of a large quantity of brandy upon the circulation, would be like that produced by the application of caustic. In a part that is about to slough, its vitality is weakened; it has already arrived at such a stage, that nothing will probably prevent its mortifying: to the surrounding parts, then, our treatment should be directed. If we apply caustic, we excite to the highest degree the vessels of the part that is sloughing; and in consequence of that extreme excitement, the vessels are soon *totally* exhausted, and the slough separates. Has this treatment a good effect on the surrounding inflammatory parts? No; but it does *much harm*! If we bleed, we as quickly deprive that part of its vitality which no human means could *ultimately* prevent, and the surrounding inflammation is thereby subdued, ere sloughing actually commences.

As I wish in this article rather to shew the good effects of bleeding, &c. according to facts, than to deduce it from theory, I will without further remarks commence with the cases.

CASE I. — Williams, King-street, Cheltenham, æt. twenty-four, consulted me on the 16th of June, 1825. He was thin, pale, and nervous; had a phagedænic chancre on the glans penis: for three weeks prior to my seeing him, he had been taking ten grains of blue pill every night. His mouth was slightly affected by the quicksilver; ulcer extremely painful; had considerably increased in size within the last three days; he was very restless day and night; his pulse was 100, hard, and wiry; bowels torpid; skin dry, conveying to the touch a peculiar faded feel; tongue coated with thick white fur; he was very weak.

R Ol. Ricini (s. i.), ʒvi. statim sumendum.

App. Foment. cum Flor. Anthemidis et Caps. Papaveris, part. affect.

(Evening).—His bowels had acted several times; ulcer still extremely painful; pulse softer; and accompanying symptoms more favourable.

R Pulv. Opii, gr. iij.

Ext. Conii, gr. vij.

Ft. pilulæ ij. unam sumat statim, et rept. tertiâ horâ, si dolor urgeat. Cont. fomentatio.

17th.—Had slept tolerably well; bowels had acted once that morning; skin softer; ulcer less painful, but extending; pulse 98; complains of being very weak.

R Quinæ Sulphatis, gr. ijss.

Acid. Sulphurici, ʒiv.

Aquæ Puræ, ʒj. M.

Ft. haustus, statim sumendus, et repet. bis terve in die. Cont; foment.

(Evening).—In excruciating pain, head not affected by the opium.

R Pulvis Opii, gr. ij. cum Conf. gr. ij.

Ft. bol. omni sextâ horâ sumendus.

Apply a wash, consisting of equal parts of strong decoction of poppies and proof spirits, to the ulcer.

18th.—In less pain; ulcer continuing to spread: it has now nearly destroyed the whole of the glans. *Cont. medicamenta*; also apply a lotion, with extract of opium, to the local affection.

19th.—Getting gradually worse. Apply the strong nitric acid.

20th.—Ulcer still spreading; derived no benefit from the acid. In short, for nine days, opium, fomentations, carbon, carrot poultices, acids, caustic, tonics, and stimulants, were had recourse to without producing good effects. The sore had become more painful than when I first saw it, and had now destroyed the whole of the glans penis, and a portion of the præputium.

25th.—Præputium and dorsum penis much swollen and inflamed; ulcer very irritable; tongue coated; pulse hard; pulsates about 95 in a minute: he complains of headach.

App. Hirudines x. ad penem statim.

R Infus. Sennæ, ℥vj.

Mag. Sulph. ℥j.

Tinct. Sennæ, ℥j.

Tinct. Card. Comp. ℥iv.

Spirit. Ætheris Nit. ℥vj. M.

Ft. mistura, de quâ æger cap. coch. amp. tria, tertiis horis.

When the leeches have fallen off, and the part ceased to bleed, apply a fermenting poultice.

26th.—Inflammation diminished; appearance of the sore improved; pulse softer than yesterday.

Rep. Hirudines et Cataplasma. et cont. Mistura ut antea.

R Pulv. Ipecacuanha Comp., gr. x.

Ft. pulv., sumendus h. s.

27th.—Granulations evident on the sore; secretes good pus; pulse soft; pulsates 80 in a minute. He had slept tolerably well; feels tranquil.

R Sp. Vin. Rect.

— Camphoræ,

Liq. Ammon. Acet. aa ℥ij. M.

Ft. lotio: app. sæpè. Contin. medicamenta.

28th.—Having appointed on the 25th to meet Dr. M^cCabe in consultation this day, I did not think it would be judicious to put off his visit on account of the favourable change in the patient. He agreed with every thing I had done for him; desired him to continue the opening medicines, and to take a wineglass of a bitter infusion every morning. To apply a wash, consisting of superacetate of lead, alcohol, and water, to the ulcer. From some misunderstanding of his friends, another surgeon was called in at this time; but on

the 30th, I was entreated to see him again. I found him in excessive pain, which he attributed to a wash that had been applied. The ulcer had assumed a dark, livid colour; and the whole of the penis was much inflamed. His pulse was wiry; tongue coated; skin hot, and dry. I applied leeches and cold lotions repeatedly to the part; gave aperient and diaphoretic medicines; and, in fact, strictly treated him on the antiphlogistic system. I had the satisfaction of observing the ulcer and his health *immediately* improve; and from persevering in the same means, they continued to improve, until the former was quite healed, and the latter perfectly restored.

CASE II.—On the 4th of July, I was consulted by J. T., Esq. About a month prior to this period, an excoriation (to which he was very subject) had appeared on the glans penis; within the last few days it had begun to slough. He was tall, and rather muscular; complexion sallow: when I saw him his countenance was expressive of great anxiety; tongue coated with a brown fur in the centre, and white on the edges; pulse 85, full, and hard; complained of headach and dimness of sight, which he attributed to the violent pain of the penis; bowels irregular; skin covered with a clammy perspiration.

Mitt. sanguis è b. ad 3xx.

Take cathartic pills and an aperient draught, and apply the fermenting poultice to the part affected.

5th.—Slough separating; pulse still hard; tongue coated; bowels open.

Cont. medicamenta ut antea.

Rept. V. S. ad 3xvj.

6th.—The previous bad symptoms had recurred, the slough remained as before, adhering in its centre firmly to the ulcer. Being very offensive, the patient endeavoured to pull it off in the night, but without success. The surrounding parts were inflamed, very painful, and of a bright red colour. All this I attributed to the person having neglected to bleed on the day before, according to my direction.

Mitt. sang. è b. ad 3xx.

R Pulv. Opii, gr. iij. post V. S.

App. cataplas. ferment.

7th.—Slough separated; ulcer healthy, secretes good thick pus; pulse soft; tongue cleaner than before; bowels open; skin moist and cool.

R Plumbi Superacet. 3j.

Sp. Vin. Rect. 3j.

Aquæ Rosæ, 3viij.

Ft. lotio: app. sæpè.

Rep. mixture, and take a grain of opium at bed-time.

8th.—Strong granulations rising in various parts of the ulcer. Cont. eadem medicamenta.

9th.—Better in every respect. Cont. medicamenta ut antea.

10th. Ulcer nearly healed; sleeps well at night; appetite good.

VOL. IV. NO. 22.—NEW SERIES.

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From this time every thing went on well ; I did not alter the treatment, and the patient recovered in about a week. I did not give tonic medicines in this case, at any stage of the disease.

CASE III.—Mr. Charles P—— (an assistant to Mr. Smith, draper, High Street, Cheltenham) applied to me on the 11th of August. Had been affected with a chancre about a month ; had taken ten grains of blue pill daily for the last three weeks, and used what other means the practitioners to whom he applied thought judicious. The ulcer extended under this treatment, and within the last few days took up a sloughing character. His general health and appetite appeared to be tolerably good ; but his pulse was hard ; face pale ; tongue coated ; bowels torpid. Very uneasy from the idea that he would lose his penis.

Mitt. sang. è b. ad 3xvj.

Apply the fermenting cataplasm.

R Magnesiae Sulphatis, 3j.

Liq. Ant. Tart. 3ss.

Sp. Ætheris Nit. 3vj.

Aquæ, 3vj. M.

Ft. mistura, coch. amp. tria sumenda tertiis horis

From his having fainted after the loss of six ounces of blood, a fillet was put on his arm.

In about six hours the slough began to separate ; his blood was much buffed, and pulse fuller than in the morning, but not so hard. Bowels open.

R Pulvis Opii, gr. ij.

Ext. Hyoscyam. gr. vj.

Ft. pilulæ ij. capiendæ hæc nocte.

12th.—Slough and symptoms as yesterday.

Rep. V. S. ad 3xviij.

R Pulv. Opii, gr. iij.

Sumenda statim post V. S. Cont. cataplasm. et medicamenta ut antea.

13th.—Slough separated ; passed a comfortable night ; granulations in different parts of the ulcer. App. lotio sequens :

R Plumbi Superacetatis, 3ss.

Sp. Vin. Rect. 3ss.

Aquæ Distillatæ, 3vj. M.

Cont. alia medicamenta ut heri.

14th.—Granulations healthy ; better in every respect ; but rather weak.

15th.—By the advice of an officious friend he had taken brandy and wine. A black eschar on the ulcer ; tongue coated, and febrile symptoms present ; passed a restless night.

Mitt. sang. è b. ad 3xx. Dein

Opii, gr. iij. sumenda.

Apply the cataplasm, et cont. mistura.

16th.—Slough separated ; ulcer healthy ; pulse soft ; skin cool. App. lotio cum plumb. ut antea et cont. medicamenta.

17th.—Ulcer nearly healed ; feels confident, and well.

Cont. ut antea.

18th.—Contrary to my direct prohibition, he had taken a long walk, and wine on returning home. The sloughing action recurred ; præputium et dorsum penis much swelled.

App. Hirudines x. part. affect.

Mitt. sang. è b. ad 3viiij.

Rep. cataplasma. et alia medicamenta.

From this relapse he lost the whole of the glans penis, and a portion of the præputium. I repeated the bleeding twice on the following day ; after which the slough separated, and the ulcer assumed a healthy appearance. From that period he progressively got better, until he recovered. I confined him to his bed, and kept him on a spare diet.

Although lotions and fomentations were applied to the inflamed dorsum penis, a linseed poultice was the only remedy that had any good effect, independent of leeches and general blood-letting. Mr. C. P. took a journey to Stroud, which caused a small abscess to form on the penis. It was opened by a surgeon of that place, who applied digestive ointment, which agreed with it very well ; and when I saw him soon afterwards in Cheltenham, the sore was so trifling that I did not think it necessary to alter the dressing.

CASE IV.—I saw J. M. Esq. on the 17th of August ; he had an ulcer on the glans penis, one side of which was sloughing ; he had been taking medicine under an eminent surgeon in London during the last fortnight ; he had also a considerable discharge from the urethra, which had ceased about three days before I saw him, from the use of an astringent injection. His testes were exceedingly painful ; one was somewhat swollen. He was an athletic man, and had, until affected with the venereal disease, enjoyed good health. His pulse was hard ; skin hot ; and tongue coated.

Mitt. sang. è b. ad 3xxv.

App. Hirudines xiv. ad testes, et lotio muriatis ammoniæ et aquæ distillatæ.

R Pilulæ Hydrargyri,

Ext. Colocynthis Comp. ana gr. v.

Ft. pilulæ duæ, capiendæ statim.

R Magnes. Sulphatis, 3j.

Infus. Sennæ, 3vj.

Vin. Ant. Tart. 3ss.

Sp. Æther. Nit. 3vj.

Tinc. Card. Comp. 3iij. M.

Ft. mist. coch. amp. duo sumenda ter die.

App. cataplasma. effervescent. part. affect.

18th.—Slough separated ; inflammation of the testicles diminished ; ulcer ill-conditioned ; secretes a thin, ichorous, and foetid discharge ; passed a restless night.

Rep. V. S. ad 3xv.

Pulv. Opii, gr. ij. sumenda post V. S.

19th.—Ulcer more healthy; testes free from pain; the urethral discharge returned. Cont. medicamenta ut antea, and take the anodyne at night.

20th.—Ulcer nearly healed; inflammation of the testes quite subdued. In about a week from this period the sore healed; the urethral discharge was returned; but I do think that the cessation of the discharge, in the first instance, might be enumerated among the causes of this case of sloughing.

CASE V.—Mr. T., a London traveller, applied to me on the 2d of September. He had an ulcer on the glans penis; he complained of intolerable itching of the penis and scrotum, and he was not aware of the ulcer being worse than usual. The sloughing disease had commenced around the orifice of the urethra; he had been in the habit of taking a bottle of wine a day, and spirits in the evening; was of a full habit of body. He had only used a lotion, and taken aperient medicines.

Mitt. sang. à B. ad 3xx.

R Pulvis Opii, gr. iij.

Ext. Hyoscyam. gr. vj.

Ft. pilulæ ij., capiendæ statim.

App. cataplas. effervescent. part. affect. et lotio cum extract. opii ad scrotum.

3d.—Penis still inflamed; itching less troublesome; slough separating. Cont. medicamenta eadem. Rep. V. S.

4th.—Slough separated; he does not complain of itching. Cont. ut antea.

5th.—Better in every respect. I desired him to use the lotio cum plumbi superacetatis. This patient recovered soon after this period. He was obliged on the 6th to leave Cheltenham, but I received a letter from him on the 11th, to say he was quite well; he had not applied to any other surgeon; had lived abstemiously, and used the lotion, (the prescription for which I gave him), and took aperient medicines. To use his own expression, 'he felt lighter and better than he had done for many months.'

SECTION II.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. *Phebitis successfully treated by Moderate Compression.*

By M. Goupil.

MADAME T., in the eighth month of pregnancy, after having felt pains in the right leg, which she had considered as cramp, applied for relief on the 27th of August. The pains were then different, and more severe than at first, and accompanied with a sensation of

weight in the affected limb. Fomentations and warm bathing produced no amendment.

On the 2d of September, a vivid redness was perceptible along the line of the internal saphæna vein, extending to the middle of the thigh, particularly visible in the situation of the valves; and excessively tender. Narcotic and emollient fomentations afforded no relief.

The intensity of the fever, the pain, tension, and redness of the parts, determined M. Goupil to bleed; and in the evening ten ounces of blood were taken. The limb was then covered with clothes dipped in Goulard's wash. In consequence of this depletion, Madame T., who had not slept an hour for two or three days, passed a tranquil night.

On the 5th, the redness had almost disappeared in the line of the vein, but was still evident in the situation of the valves. The improvement was greater from day to day, and she was to have left her bed on the 12th.

On the 11th, without any assignable cause, the pains, hardness, and redness, reappeared with greater severity than before; and the vein felt under the finger like a knotty, tortuous cord, extending from the internal angle to the middle of the thigh. The application of Goulard's lotion was this time useless; and she had no sleep till the 14th, when compression was made along the leg and thigh by means of a roller. The relief afforded by bleeding in the first attack offered some inducement to repeat it, at least by leeches; but the weakness of the patient seemed to render it inadvisable. A painful feeling of fulness, and a kind of itching, were the immediate consequences; and so unpleasant, as frequently to tempt the patient to remove the bandage, notwithstanding the relief it gave. Sleep returned the same night, and the recovery from this time was very rapid. The application of the bandage was continued to the 30th, but was applied the last few days more loosely. On the 29th, she left her chamber; and now, the 21st of October, is perfectly well; but has not yet been confined. The blood continues to circulate through the affected vessel.—(*Nouvelle Bibliothèque Méd., Janvier 1827.*)

II. *Encysted Tumour of the Abdomen spontaneously emptied through the Bladder.*

M. LISFRANC read to the Academy of Medicine the case of a woman who had enormous fluctuating tumour in the abdomen. One day, in attempting to pass her urine, she discharged at the same time a great quantity of yellowish mucus: the size of the abdomen diminished suddenly, and during the discharge she suffered from repeated faintings. M. Lisfranc properly attributed this to the sudden subsidence of the tumour; and the fainting ceased as soon as the head was laid low. The discharge continued, and in a month the bowels had resumed their natural size. There is now a hard, movable tumour to be felt, half the size of the fist, which has remained in the same state for nearly two years. She has

regained her health and strength.—(*Archives Générales de Méd., Février 1827.*)

III. *Diphtheritis.*

IN the Number for December we published a long review of M. Bretonneau's work upon this subject, in which we had occasion to remark upon the unwillingness of the French to believe in the efficacy of calomel. It appears, that he has since discovered that the effects of mercury in the disease are to be dreaded; and after much time he comes forward in praise of alum. Of course, it can only be useful before the complaint has extended into the air passages. We give the following case, as a specimen of the mode of applying it:—

'Charles Mirbeau, aged twenty-nine. The tonsils were excessively swelled, especially on the left side, which was at the same time in part covered with thick membranous concretions of a yellow colour. The uvula was more swelled than in any case M. Bretonneau had seen. The pulse was small, frequent, and undulating; the debility of the patient was such, that he could scarcely support himself: the swelling extended from the neck over the whole face. Alum was applied repeatedly to the tonsils in the form of soft paste. On the second day the diphtheritic inflammation was completely modified; large, thick, pellicular concretions had been expectorated, the swelling of the tonsils and uvula was diminished; there was still some concretion on the left tonsil,—but the fever had ceased, and deglutition was easy. On the third day, the fauces had nearly regained their natural appearance.'—(*Archives Générales de Méd., Janvier 1827.*)

IV. *Case of Inflammation of the Gall Bladder, combined with Nephritis and Inflammation of the Urinary Bladder.* By M. O. BALLY.

MADELEINE BERNARD, aged twenty-four years. She had lain in between three and four months before her admission into the hospital, 20th of September, 1826. She appeared to have suffered much from distress of mind; and at her admission exhibited symptoms of gastric disturbance only.

On the 6th of October, eighteen days from the first attack, she had a small and frequent pulse, and had become deaf: her urine was yellow and turbid.

On the 11th, it was noticed that there were daily febrile exacerbations.

13th.—Diarrhœa; intermittent pulse; urine yellow, syrupy.

14th.—Febrile attack slight; lying on the back; tongue clean; abdomen painful; pulse very frequent; skin very hot.

16th.—Same state; urine orange coloured, turbid.

17th.—Delirium; vomiting constant; pulse small, frequent, feeble.

24th.—Tongue natural; extreme sensibility below the liver;

urine with a very abundant sediment; pulse undulating, incapable of being counted.

25th.—Pulse very hard, and frequent; severe peritonitic pain.

27th.—Vomiting of a great quantity of purulent matter from the bronchi; no diarrhœa; pulse frequent, and very small.

Examination thirty hours after Death.—The gall bladder was white externally. Manifest traces of inflammation on the free surface, characterised by spots of a dark red colour. The gall bladder was filled with pus of a light green colour, with little smell, and having the common properties of pus. The internal surface was marked with red patches, corresponding to the patches observed externally. The traces of inflammation were visible also on holding the bladder up to the light. The stomach was softened, and there were ulcerations in the cæcum and colon.

The left kidney was very red. The pelvis and the calix were much injected and inflamed. In the right kidney the same parts were white. The bladder contained some very thick urine; and the mucous membrane was inflamed. There was nothing else remarkable.—(*Journal Générale de Méd.*, Janvier 1827.)

V. *Memoir upon the Œdema, or Induration of the Cellular Tissue of Infants.* By C. BILLARD.

THIS disease is what has been termed 'skin bound,' by some English authors, and is mentioned by Dr. Heberden, in his epitome of the Diseases of Children as 'a disease attended with hardness of the skin.' M. Billard considers one variety of it as simple œdema, and another as depending upon the hardening of the adipose substance. When the tenseness of the integuments is owing to the infiltration of the cellular tissue, the limbs are always swelled, more or less voluminous, and the deep colour of the integuments indicates plethora and congestion in different organs: the irregularity of the pulse, and the difficulty of breathing, are evident symptoms of superabundance of blood in the heart, the lungs, and the great blood-vessels. The hardening of the adipose substance occurs with or without general infiltration of the subcutaneous cellular structure. The cheeks, the thighs, the calves of the legs, and the back, are the common situations of this hardening. It is observed with or without disturbed respiration, and ordinarily supervenes at the point of death. M. Billard has seen it take place after death upon children who have been rapidly carried off. The adipose tissue is found firm, fixed, and as hard as suet, upon dissection; in fact it presents the same characters as meat in butchers' shops. We may then imagine that the fat, under certain circumstances, may, even during life, become concrete, if the animal heat should by any means abandon it.

M. Billard next considers the nature of the œdema. Is it different from the œdema in adults? M. Breschet had maintained the affirmative, and had supported his opinion by an analysis of M. Chévreur. This chemist states that in the jaundice accompany-

ing the hardening of the skin; the blood is diseased, that it contains a peculiar colouring principle, and that there is in the serum separated from the febrine, a spontaneously coagulating matter. The jaundice is not now the object of investigation. It is sufficient to observe that it does not necessarily accompany the œdema. It is true, however, that the serum does contain a substance that coagulates spontaneously; but it is also true that the serum of healthy children equally coagulates spontaneously. M. Billard has placed in one vessel some serum taken from a child whose integuments were œdematous, and in another vessel some serum taken from a child in whom there was no œdema. Coagulation was effected in both instances in very nearly the same time. M. Billard remarks that the coagulation is more rapid as the quantity is less; in short, that it requires the ordinary conditions of evaporation.

Moreover, M. Billard found that by making incisions into the infiltrated limbs there was a rapid flow of serum, and that the skin lost all its hardness. *Sublata causa, tollitur effectus.*

It results then, from these facts, that this peculiar state of the skin in infants is nothing else than true œdema, altogether of the same nature with that which is discovered in adults affected with disease of the heart, or great blood-vessels. The hardness of the skin is entirely owing to its being much less loose than in maturer age, and consequently yielding less readily to the pressure of the fluid.

Among a variety of other opinions quoted by M. Billard, that of M. Baron, the principal physician to the Hospital 'des Enfants Trouvés,' alone seems deserving of notice. He has long regarded it as a simple œdema, symptomatic of some disturbance in the circulation, whether seated in the lungs, the heart, or the great blood-vessels.

In the year 1826, 5392 infants were admitted into the Hospital 'des Enfants Trouvés.' Of these, 240 were affected with œdema, or hardening of the skin. The numbers in each month were as follow:—

| | | | | | |
|------------------------------|---|---|---|---|----|
| January | - | - | - | - | 15 |
| February | - | - | - | - | 15 |
| March | - | - | - | - | 16 |
| April | - | - | - | - | 18 |
| May | - | - | - | - | 22 |
| June | - | - | - | - | 3 |
| July | - | - | - | - | 1 |
| August | - | - | - | - | 14 |
| September | - | - | - | - | 10 |
| October | - | - | - | - | 16 |
| November | - | - | - | - | 29 |
| December | - | - | - | - | 15 |
| Of whom no account was taken | - | - | - | - | 66 |

Total - - - - 240

Almost the whole of these children were from one to eight days

old, and some were affected from birth. The most common accompanying disease was jaundice.

Of ninety children that were examined, the liver was morbidly affected in twenty only. Of seventy-seven, forty-three had the lungs perfectly healthy. Of the same seventy-seven, forty had the foramen ovale closed; and in twenty-eight the ductus arteriosus was considerably contracted. In fifty there was inflammation of the digestive canal, to a greater or less extent.

Lastly, what is more worthy of notice, there was in all a very remarkable general congestion. The venous blood, especially, predominated in the different tissues; and there was a considerable flow of blood upon dissecting the bodies of children thus affected. This general congestion is rather due to a superabundance of blood in the system, to a kind of congenital plethora, than to a mechanical obstacle in any one point of the circulation. On the other hand, the skin is remarkable for its great dryness; no moisture is manifest, so that we may suppose there is some derangement in the capillary circulation. Accordingly, the usual surplus not being carried off by the secretion from the skin, a general plethora ensues, and subsequently effusion. One fact comes in aid of this opinion; it is, that stimulating frictions quickly remove the œdema; and when an infant is wrapped in warm flannels, applied immediately to the skin, it is found the next day in abundant perspiration; and the œdema entirely gone, or greatly diminished.

M. Billard thinks that the opinion respecting the fatality of this disease is incorrect. It has arisen from the circumstance of its generally accompanying other more important diseases.—(*Archives Générales de Médecine*, Février 1827.

VI. *Existence and Use of the Cephalo-Rachidian Fluid.*

M. MAGENDIE has read a memoir upon this subject to the Académie Royale des Sciences. The following are his conclusions.

‘ The cephalo-spinal fluid is one of the natural humours of the body, and on account of its utility it ought to hold the first place in the list of animal humours.

‘ It is indispensable to the free exercise of the functions of the brain and the spina medulla.

‘ It protects these parts against external violence.

‘ It influences the functions of the brain and spinal chord by the pressure which it exercises upon them, by its temperature, and by its chemical nature.

‘ At the base of the fourth ventricle there is always an opening, which establishes a free communication between the ventricles of the brain and the cephalo-spinal fluid.

‘ The ventricles are constantly filled with this liquid, and their cavities will contain two ounces, without any disturbance of the intellectual faculties. When above this quantity, there is generally some disturbance in the locomotive powers, and greater or less diminution of intelligence.

‘ It is very probable that there is often, and particularly during the movements of the brain, a flux and reflux of the cephalo-spinal fluid from the chord into the ventricles, and from the ventricles into the chord.

‘ A fluid secreted in the spinal chord may pass rapidly into the ventricles of the brain, and fill them.

‘ A fluid secreted in the ventricles may pass quickly and without obstruction to the lowest part of the sacrum.

‘ An accidental fluid upon the surface of the brain passes in a few moments into the cavity of the spine and of the brain.

‘ Lastly, it is very probable that the natural fluid of the ventricles, &c. has its principal source in the vascular membrane which covers the spinal medulla.’—(*Archives Générales de Médecine, Février 1827.*)

VII. *Composition of the Fluid found in the Vertebral Canal.*

M. LASSAIGNE has analysed this fluid as it exists in the spinal canal of the horse. The fluid was furnished him by Magendie.

‘ *Physical Properties.*—It is colourless, and limpid as water; it emits no odour, the taste is slightly saline. It is a little heavier than distilled water; its density is 1.0065 compared with water as 10000.

‘ *Chemical Properties.*—It renders red turnsole paper blue,—thus proving the presence of an alkali: it becomes slightly turbid on the addition of some drops of nitric acid; precipitates infusion of galls, forms with the nitrate of silver and proto-nitrate of mercury abundant white precipitates insoluble in an excess of nitric acid. The solution of perchloruret of mercury produces but a slight turbidness; and after some time, flocculi little abundant.’

From these and other experiments, the composition appears to be:

| | | | | |
|---------------------------------------|---|---|---|--------|
| Water | - | - | - | 98.180 |
| Osmazome | - | - | - | 1.104 |
| Albumen | - | - | - | 0.035 |
| Chloruret of sodium | - | - | - | 0.610 |
| Subcarbonate of soda | - | - | - | 0.060 |
| Phosphate of lime and traces of carb. | | | | 0.009 |

99.998.’

(*Annales de Chimie et Physique, Dec. 1826.*)

VIII. *Case of Malconformation of the Bladder and the Organs of Generation.* By HENRY VERNON, M.D.

‘ AN infant, three days old, was brought to me for examination, by a midwife of this place, having a strange-looking tumour immediately below the umbilicus, and whose organs of generation were in a very defective state. It was a male child, and in other respects fine and healthy looking.

‘ The tumour at first sight appeared to be of a fungous kind; it

had a pear shape, and extended from below the umbilicus to the pubes.

‘On a closer examination, however, it was ascertained to be formed of the internal membrane of the bladder, the orifices of the ureters opening into the lower part of it a little distance from each other, from which the urine could be seen trickling down, and soaking quickly the cloths with which its belly was bound. They were sufficiently wide to admit a blunt probe, which could be pushed up nearly three inches towards the pelvis of each kidney. The penis was merely a soft, red, and flat glandular-looking substance, about half an inch in length, with a thick doubling beneath, resembling a prepuce; a furrow ran along its upper surface, into which two orifices opened at about the middle of it, separated by a caruncula. These, no doubt, were the extremities of the ejaculatory ducts with the *caput gallinaginis*. It appears as if the penis, with its integument dissected off, had undergone a longitudinal section on a level with the urethra. The crura penis could be plainly seen diverging towards the tuberosities of the ischium.

‘As the child is still living, and likely for life, I have not had it in my power to examine the state of other parts, as the *vesicula seminales*, &c. The testicles have descended into the scrotum.

‘The malconformation is one of those in which the anterior half of the bladder is wanting, the posterior and only portion of it being protruded in a globular shape by the intestine situated behind it, and forming a tumour which occupies the room of an equal portion of the abdominal parietes, which are wanting in these cases.

‘It would also appear, that the penis shared in this sort of deficiency, or the same that would result from a longitudinal section commencing at the fundus of the bladder, and continued to the extremity of the glans penis.’—(*Edinburgh Med. and Surg. Journ. for Jan.*)

SECTION III.—INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. On the Tendency of the Medical Writings of Dr. Kitchiner.

AMONG the casualties of the last month, we have to record the death of Dr. Kitchiner, a good-natured, eccentric person, better known as the author of a work on Cookery than as a physician. His father, we are informed, was an eminent coal-merchant; and he seems to have left his son a sufficient fortune to render it unnecessary for him to submit to the fatigues and inconveniences of practice. The same circumstance, though it seems not to have introduced him into society in which his eccentricities would have been checked, enabled him to be a patron, as far as dinners and suppers constitute patronage, of numerous poets, players, singers, and musicians, in whose company he freely indulged his harmless oddities. Although he

appears to have devoted a very large portion of his hours to the serious business of eating and drinking, he yet found time to be an author, and on many subjects. He was a musical composer: he collected the National Songs, and dedicated them to the King: he wrote on Emphasis and Accent: he is the first modern authority (out of Paris) on the subject of Cookery: he published a work on Spectacles and Optics: we have heard the Century of Surgeons on Gonorrhœa, &c. ascribed to him: he was a committee-man, and a steward on many festive occasions: and above all, he was the author of a book on The Art of Invigorating Health and Prolonging Life.

Our only business with his memory is as a medical author; and we should not allude to his strange productions even in this capacity, if we did not believe that his wild and absurd book had done some mischief to the public. No work could be better devised to *destroy* health and to *shorten* life than the one which the late Dr. Kitchiner published with a title professing to invigorate one, and prolong the other. It is dedicated to the Nervous and Bilious, which means all mankind, but particularly those unhappy people who have acquired a habit of concentra ing their thoughts on the state of their stomach and bowels; and its pages are filled with quotations, from almost every work ever published, with a view to promote the care of *self*. Whoever is a daily or a frequent reader of this work, may, we think, be set down for a man all whose good feelings will by degrees be lost in the care of his own 'vile body;' no quackery will be too foolish, no *coddling* too contemptible, for such a person: he will daily become less fit for all the duties of his station, and, after all his care and pains-taking, die some day after dinner. The attempt to combine the most selfish gluttony with health; to indulge in every luxury, and to hope to escape pain and sickness; the belief, that a healthy soul and body depend upon measures of beer and gruel, and doses of carbonate of soda: or that any man can be useful or respectable, who, calling himself in health, takes medicine every morning, and gruel every night at bed-time,—are errors which do not only affect the common sense, but the morals of mankind: and we confess we could never open the pages of Dr. Kitchiner's book without the utmost disgust. In every page we find a consideration of the mere *animal* part of our nature, a recommendation of some silly or mischievous custom, which no man with the proper feelings of one would not feel himself debased by adopting. Habitual attention to these matters, we are well convinced, infallibly sinks and lowers the character; and although we may seem to say more about them than is required, yet we cannot help entertaining an opinion, founded on some observation, that if the better classes of society devote their attention to the unmanly arts of Dr. Kitchiner,—whilst the mechanics, nay, the very labourers throughout the kingdom, are daily becoming more and more informed,—even this cause, trifling as it seems at first sight, will operate with others to alter the frame of society. It is for these reasons that we have devoted a page to this subject, because we think it is in the power of medical men, and we are sure it is their duty, to banish these indelicate books from the

libraries or the nurseries of their patients. The rules of health are few, and simple, and easily communicated; but of the recommendations of ignorance, selfishness, and folly, there is no end.

We acquit Dr. Kitchiner of having written for profit; but he certainly wrote for the booksellers, to whom he must have been a very valuable author. His style presents an example of every thing that is vicious; but this he could not avoid; indeed he evidently thought himself a very fine writer. Nor do we think that he wished to produce bad effects on his readers: his mistake was, that he thought people were mere cases of digestive apparatus, and that the whole art of life resolved itself into pouring as much *into* the throat, and *out* of the intestines, as it was possible. This may seem coarse criticism, and so perhaps it is; but although we deliberately avow, that we think the tendency of Dr. Kitchiner's works most pernicious, they are composed in so strange a manner that the common rules of criticism are quite inapplicable to them, even if any attempt to review them in a methodical way was not a pure loss of time that might be better employed.

Among the persons who frequented the Doctor's feasts, and obeyed his mandate to 'come at seven, go at eleven,' many will be found who will speak of him in very different terms. He very probably had many private virtues; and if he had been poor, and compelled to divert his mind from the common domestic details of the table and bed, he would doubtless have possessed many more. We have merely exercised the right of pointing out the evils which we think arise from an attention to writers of his class, in the hope of producing in our medical readers the same contempt for these popular auxiliaries of quackery that they feel for quackery in a less disguised and less dangerous, and, we may add, in a less demoralising shape.

II. *On Medicine, with relation to Princes.*—(*Sur la Médecine des Princes.*)

To possess almost boundless wealth, to be the fountain of honour, to be able by the slightest word to give motion to vast portions of the community, to have the means of gratifying taste to the utmost, to be approached with invariable respect, and obeyed in all matters, great or little,—doubtless seems a very agreeable condition. But princes who enjoy these privileges purchase them at the expense of many means of happiness. Placed in a situation which seldom permits them to see a face of which the expression has not been schooled for the interview, precluded from the probability, if not the possibility, of having a true and faithful and disinterested friend, shut out from those paths of hope and ambition in which their fellow-creatures find a constant satisfaction, and often unable to supply the excitement they require in common with other men, except by means which are frivolous, or of which the effects are most pernicious to the welfare of their subjects, we cannot think that any wise man would willingly exchange his own lot for one of which these are but a few of the privations and sources

of disquiet. M. Fodéré, in a paper of which we have placed the title at the head of this article, thinks that princes have also the additional disadvantage of not being properly attended to when they are sick. This, we should suppose, depends very much on the good sense of the prince himself. If he does not so much love to indulge in those feelings of superiority which are gratifying to human vanity, as to surround himself with men of poor attainments and weak judgment, skilled only in the softer arts, or in the science of smiling, or in the affected secrecy and real falsehood which are so commonly met with in the precincts of a court, he certainly has the greatest facility of summoning all that is able and experienced to his aid. But if he will prescribe for himself, if he will not hear the truth, or submit to the 'needful severities of medicine,' he of course places himself in a situation far inferior in point of advantage to that of the poorest subject in his dominions, who can get himself conveyed to an hospital, or visited from a dispensary. That many great men, not princes only, but men of sufficient rank to be triumphant in obstinacy, have died in consequence of opposing the prescriptions of their medical attendants, might easily be proved. The recent and much-to-be-deplored instance of Lord Byron cannot be forgotten. Napoleon exhorted M. Dubois, when the confinement of Maria Louisa was at hand, to fancy her the wife of a peasant; fearing that his trepidation in a conjuncture which was probably to give an heir to the throne of France, or his respect for the empress, might interfere with such measures as might be required.

The remarks of M. Fodéré are chiefly founded on the circumstances attending the last illness and death of the Emperor Alexander. We cannot give insertion to M. Fodéré's severe animadversions on the *treatment* of that illustrious patient, although it seems very plain that he died of fever, and that the most valuable time was lost in the beginning. There is reason to think that his physician might have saved the emperor's life, if the most polished despot of modern times had been willing for once to obey. As for M. Fodéré's strictures on such parts of the treatment as were practicable, we leave them to be answered by those whom they concern. No task is more delicate, and none so difficult, as to pronounce on the treatment of a case from the narration that is given of it, and in which it is perhaps often impossible to convey a just idea of many circumstances by which the physician was influenced. The following remarks are of a more general nature, and not altogether without a mixture of reason. But surely M. Fodéré would but add to the trials of a royal station, if the prince, according to his suggestion, was to be denied the privilege of choosing his own physician, and was compelled to trust his life to any man above the age of forty, who had art enough to secure a majority of votes in a medical jury. The evil pointed out will be remedied in a far better manner. Even princes begin to see the necessity of adding the advantages of education to those of birth. We question whether so contemptibly ignorant a person as Louis the Fourteenth would now be tolerated in any country, except Spain; and as the

knowledge of princes increases, the character of those about them will improve. We may speak freely on a subject of this kind in England, where it is our happiness to possess a Sovereign, not only eminent for many kingly virtues, but possessed, in a very high degree, of all the accomplishments of a scholar and a gentleman, and of a knowledge of mankind never, perhaps, surpassed by one of his exalted station.

The following observations are translated, and a little abbreviated, from M. Fodéré's paper.

‘ One of the first obstacles to princes enjoying the benefits of an enlightened physician, rests on the principles of the education which most of them have received, and which have accustomed them to look upon themselves as entirely different from other men, not only in their moral, but in their physical qualities; so that they can hardly admit the idea of being attacked with illness, or that they can be liable to the maladies which afflict their subjects. Accustomed to find every thing bend to their desires, they wish to be cured at once, will not listen to reason, and fancy there must be especial remedies for *them*, capable of immediately restoring them to health and strength. From hence has arisen the illustrious patronage of quack medicines; and from thence also proceeds the ordinary neglect of all the rules of prudence whilst they are in health, and their resistance to dietetic and therapeutic counsels when sick. Besides this, an active prince, and of a martial character, requires from policy, or from necessity, the habit of despising every thing in the shape of prudent precaution; and the habit is imitated by the great officers who are under him. This was the case with the Emperor Alexander. Not less a warrior than a legislator, he was impatient of restraint, and would not be contradicted: medicine was to submit to him, like the social elements around his throne; but this was precisely the point of his mistake. Yet the strong love of life will make even princes yield to the firm suggestions of a physician, if he has gained a just respect by his intelligence, his devotedness, and his sincerity. Nor need such a one fear that his patient will think him troublesome, or long be displeased with his sage importunity. Truth will be heard at last: for the physician of a prince is not his valet, but is, or ought to be, his friend, in the full extent of the meaning; and, independent of the elevated sentiments which we may suppose him to cherish, and which are inseparable from the proper study of medicine, his very interest leads him to preserve the precious charge confided to him, and which when he loses, he loses every thing. It is very true, that with the best intentions and unlimited zeal, a physician may be disregarded, in consequence of his prince becoming tired of him, or in consequence of court intrigue: but in such a case, the duty of a good man is to withdraw himself, that he may not be a witness of evils he cannot prevent, but part of the odium of which is sure to be thrown upon him. Our profession is capable of these generous sentiments, of which more than one example might be adduced. And such examples would be more common,

if the physicians and surgeons to royal personages were chosen differently, and not assigned to them like a page, or any other officer of the household, with a forgetfulness that probity, talent, profound acquirements, judgment, and experience, are not to be conferred like titles and dignities. Professional men who aspire to these posts, attach themselves to the favourite courtier, whose discourse and manners they copy: the courtiers are glad to promote a man who is sure to speak of them, and therefore they exalt the pretensions of their protégé to the clouds. The successful physician studies the quintessence of adulation, apes the courtiers, haunts saloons and antechambers, and just pays enough attention to physic to know what is going on in it, and to get a few more formulæ; and thus the prince, instead of gaining a faithful servant and a constant friend, has only made the acquisition of one flatterer more.

‘It is more easy to see the necessity of a reform in the mode of electing the physicians of princes, than to effect it. The physicians who aspire to such a delicate and important appointment, should be judged by *their peers*. They should be examined by a jury, composed of members chosen from among the professors of the faculties of medicine in the dominions of the prince, at which the prince himself, as the person most interested, should preside; the candidates should not be less than forty years of age, and should be expected to shew that they had been devoted to medical studies from their youth; and also be examined on different points connected with those studies; concerning the distinguishing and preventing of diseases, and the treatment of them: they should also be obliged to prove their talents and knowledge by the management of several patients. Physicians thus chosen, would know beforehand the medical geography of places to which the prince might travel, and the maladies peculiar to them, and would therefore become more useful to the people, as well as to kings. They would be familiar with the works of Lancisi, Torti, Werlof, Mercatus, Medicus, Stoll, Grant, and other authors, of whom our fashionable physicians do not even know the names: they would not be exclusive partisans of the *debility* of Edinburgh, the *irritation* of Paris, the *contro-stimulism* of Milan, or the *homeopathia* of Keethen; but they would be at once Hippocratists and Eclectics, and the people might confide to them the precious preservation of those placed under their care, and with whose destiny the tranquillity and happiness of states are connected.’—(*Journ. Complén. Fevrier.*)

The above observations are written with spirit, and no doubt with a great share of truth. They certainly do not present a very flattering picture of those to whom we are almost left to suppose the lives of the present royal family of France are confided.

III. *On the Alleged Communications between the Lymphatics and the Veins.*

‘In the Italian Annals for 1824, a short notice was given of some

anatomical observations, not yet published, which were believed to establish the existence of communications betwixt the lymphatic glands and the veins. Dr. Rossi has taken up the same subject of inquiry, and has satisfied himself, by very careful injections and anatomical examinations, that the supposed communicating vessels are not lymphatics, but veins, and are in fact the nutritious veins of the lymphatic glands. In the body of a young man, who died excessively emaciated from pulmonary consumption, he injected with quicksilver the lymphatics leading out of the inguinal glands, after previously securing the thoracic duct with a ligature above the diaphragm. On then laying bare the lumbar lymphatic plexus, he found issuing from it, besides the ordinary lymphatics, three small vessels, proceeding one to the vena cava at its exit from the posterior concavity of the liver, another to the beginning of the emulgent vein, and the third to the termination of the spermatic vein. These vessels, which at first sight appeared to be lymphatics, proved on careful inspection to be veins; for they were uniform in calibre, had no valves, and contained a dark red fluid mixed with the quicksilver. On removing the lumbar and primary iliac plexuses, he found other vessels of the same description proceeding from them to the vena cava, the common iliac vein, and one of the lumbar veins.—In another body, he injected the lymphatics of the mesentery. From the mesenteric glands he saw, besides the ordinary lymphatics, many short vessels proceeding to the great branches of the *venæ portarum*, particularly to the splenic veins. They contained very little mercury, however, and had all the characters of veins.—In another body, he injected the inguinal glands from one of the lymphatics at the knee; and in like manner remarked several little vessels going from the glands to the femoral vein, and filled partly with mercury, partly with blood. That these vessels had no valves, and consequently could not be lymphatics, was made evident by emptying them by incisions near their origin in the glands, and pouring mercury into their terminations in the femoral veins, when the mercury passed at once through the incisions. From these, and other similar experiments, Rossi concludes, that the alleged communicating vessels are really veins; and very properly adds, that the introduction of mercury into them by the lymphatics is not a proof of the passage of natural fluids from the latter vessels into the veins. In support of this statement, he relates a dissection he made of the inguinal glands and lymphatics in a case of anasarca of the limb. The lymphatics were every where distended with colourless serosity; but the supposed communicating vessels contained a red fluid like blood. He therefore considers them as nothing else than the veins which convey into the circulation the blood employed in the nutrition of the glands.’—(*Annali Universali di Medicina*, Gennajo, 1826.)

IV. *Comparative Diseases of the Tailors, Carpenters, and Bakers, in Hamburg.*

‘In this free city are two small hospitals supported by the free-
VOL. IV. NO. 22.—NEW SERIES: 3 A

masons. That appropriated to the male sex was intended for labourers; but in 1806 began to be resorted to by the tailors, and in 1811 by cabinet-makers; but the latter did not use it after September 1824. The total number of tailors treated was 785; of cabinet-makers, 511; and of bakers, only 71;—and the deaths were, 84 tailors, or 1 in 9; and 21 cabinet-makers, or 1 in 24; bakers, 4, or 1 in 18. Diseases which are apt to prove fatal to weak persons were much more fatal to tailors than cabinet-makers; of those affected with nervous fever, one-third of the tailors, and one-seventh of the cabinet-makers died. Of twelve cases of abdominal inflammation, seven tailors died,—while five cabinet-makers recovered. One-half of the deaths among the cabinet-makers was from phthisis; one-third of the tailors. The following table exhibits the proportions affected with the principal diseases, compared with the total number of patients exercising each trade:—

| Diseases. | Tailors. | Cabinet-makers. | Bakers. |
|----------------------------------|----------|-----------------|---------|
| Catarrhal fever, | one in 6 | 9 | 6 |
| Rheumatic fever, | - 15 | 14 | 6 |
| Nervous fever, | - 12 | 24 | 18 |
| Gastric fever, - | - 12 | 12 | 18 |
| Intermittent fever, | - 10 | 17 | 18 |
| Inflammatory fever, | - 98 | 64 | — |
| External injuries, | - 98 | 22 | 35 |
| Ulcers, | - 98 | 12 | 14 |
| Ascarides (<i>fingerwurm</i>), | — | 46 | — |
| Arthrodynia (<i>gicht</i>), | - 27 | 26 | 10 |
| Pectoral disease, | - 10 | 10 | 14 |
| Phthisis, | - 22 | 32 | — |
| Hæmoptysis, - | - 4 | 102 | — |
| Asthma, | - 131 | 170 | 24 |
| Hepatitis, | - 98 | 170 | — |
| Icterus, | - 60 | 73 | — |
| Hæmorrhoids, | - 98 | 255 | — |
| Deaths, | - 9 | 24 | 18. |

(*Gerson und Julius Magazin der ausländischen Literatur*,
July, August 1825.)

V. Extracts from the Bills of Mortality of Berlin for the Year 1825.

‘ In the year 1825 the population of Berlin, including the military, was 203,470. The births were 8033, or one in twenty-five of the population; and of these 4127 were males, and 3906 females,—6876 legitimate, 1157 illegitimate. The deaths were 6426, or one in thirty-two of the population; of these 3494 were males, and 2932 females,—2102 under twelve months, 3222 under ten years, 3426 under twenty years, 599 above seventy years. The still-born were 381, of which 215 were males, 166 females. The marriages were 2126. The births exceeded those in 1824 by 502, the deaths were fewer by 40, the marriages more numerous by 325.

' The deaths, within the first twelve months, among the illegitimate children amounted to one-half of the births, and among the legitimate children to one-fourth only. The difference in the chance of life between legitimate and illegitimate children is farther shewn by the mortality among those under ten years, and by the proportion of still-births. The illegitimate children form only an eighth of the births, but a fifth of the deaths before the close of the tenth year: the proportion of still-births among illegitimate children is a tenth, among legitimate children only a twenty-sixth. On comparing these proportions with those formerly assigned by Dr. Casper for the years 1819—22, inclusive (see p. 174 of our last volume), it appears that there is a diminution in the proportion of illegitimate births from 16 to 12½ per cent,—but an increase in the deaths among the illegitimate from 49½ per cent, before the fifteenth year, to 50 per cent before the tenth year,—and also an increase in the proportion of still-births among the illegitimate from 8½ to 10 per cent. These facts are very curious. In our review of Casper's *Statistics*, we shewed that, as illegitimate births increased in Berlin, the proportional mortality among illegitimate children decreased very remarkably. If the facts above mentioned are confirmed by future experience, it will follow that this proportional mortality will go on increasing as the proportion of natural births decreases again. The cause is not far removed from observation.

' In the list of the causes of death the most interesting facts are the following:—Forty-seven women died in child-bed; that is, the deaths in child-bed were one in 137 of the general mortality, being somewhat more than between 1819 and 1822. Of the 47, 22 died of puerperal fever, 60 of measles, 108 of scarlet fever, 1076 of various inflammatory fevers, 416 of consumption, 358 of dropsy, not reckoning hydrocephalus, of which there died 77, 558 of apoplexy, 7 of small-pox, 75 of accidents, 47 of suicide. The mortality lists of Berlin will be henceforth of very great value; for by a municipal regulation the friends of every deceased person, when they announce the burial to the proper church-officers, are required after this to fill up a schedule of particulars, and likewise to present a certificate of the cause of death by the medical attendant.'—(*Hufeland's Journal der Practischen Heilkunde*, April 1826.)

VI. *On the Relation between the Tartar of the Teeth and the Saburral Crust of the Tongue.* By Dr. P. S. DENIS.

' M. DENIS collected a large quantity of the white crust which forms on the tongue during dyspepsia, with the view of submitting it to chemical analysis. The quantity he procured from one patient in the course of four months weighed in its dry state 231 grains. It was semi-transparent, and was formed of agglutinated grayish-yellow particles, with a number of very fine dirty crystals without apparent facettes. When treated with hydrochloric acid, part of it was dissolved with effervescence; the remainder was altered mucous.

The filtered solution gave an abundant precipitate of phosphate of lime, with ammonia; and after this was separated, the oxalate of ammonia threw down a considerable quantity of lime. The proportions of the ingredients in 100 of the dry compound, were 50 of altered mucus, 34.66 of phosphate of lime, 8.66 carbonate of lime, and 6.66 of the ordinary soluble salts of the animal fluids. This composition agrees very exactly with the analysis of the tartar of the teeth, as determined by MM. Vauquelin and Laugier. M. Denis, therefore,—after considering the various explanations hitherto given of the way in which the tartar of the teeth is formed, and proving in particular that it can be owing neither to a deposition from the saliva, nor to a secretion from the gums, as several late authors have imagined,—infers, that it is formed by the saburral secretion from the tongue enveloping the teeth, and depositing its crystalline matter upon them. This inference is established by various satisfactory arguments, and especially by his having found that the slimy matter which envelops the teeth of dyspeptics, who neglect to clean them, has the same composition as the saburral matter of the tongue.’—(*Journal de Chimie Médicale, Juillet 1826.*)

VII. *Treatment of Artificial Joint by Excision of the Ends of the Bone.*

‘THIS operation, first proposed by White, and since performed by various surgeons, has been lately tried by Cittadini of Arezzo. As it has been attended with but indifferent success in the hands of many, and Cittadini succeeded completely, we shall add the particulars of his case. A farm-servant sustained a fracture of the radius and ulna from a blow with a stick. In a month the ends were re-united; but they were again separated in consequence of his returning too soon to his work. Three months after the injury he came under Cittadini’s care, who found in the seat of the fracture a preternatural joint, which permitted the lower part of the forearm to be bent upon the upper in every direction. The patient was first subjected again to the ordinary treatment for two months; but as no appearance of union ensued, it was inferred that a fibro-cartilaginous matter had covered the ends of the bones. The fragments were therefore rubbed on each other to excite inflammation, and the arm was kept in a state of continual extension. The result not being more favourable, Cittadini resolved to cut down upon the fracture, and saw off the broken ends. This was accordingly done by making a longitudinal incision through the integuments of the palmar surface of the forearm, detaching so much of the muscles as left two or three lines of each of the ends of the bone free, and then removing with the saw about two lines from each of the broken ends of the ulna. The patient would not submit to have the operation extended to the radius. The wound was, therefore, properly dressed, and the arm secured with a twelve-tailed bandage. Violent inflammation ensued, on account of which it was necessary to remove the bandage, to apply emollient poultices, and to resort to

blood-letting. Profuse suppuration succeeded; and in the course of a month it extended over the whole forearm and hand, so as to require several counter-openings. Eventually, however, these accidents were got the better of; the wound cicatrised, the fractured ends of the ulna were connected by an osseous union, and, what is remarkable, the broken radius also became firmly united, apparently in consequence of the fibro-cartilaginous covering of its fragments having been destroyed by the suppuration. In six or seven months the swelling of the arm was entirely removed, the muscles soon recovered their suppleness, and the man is now able to make every kind of exertion with facility. We hardly think this case is much in favour of the treatment by excision, as the patient made a narrow escape. In our next Number we shall give an account of a paper very favourable to the method by the seton.'—(*Annali Universali di Medicina, Febbrajo 1826.*)

VIII. *Partial Removal of the Humerus in the Hamburgh Hospital.*

'A YOUNG man dislocated his humerus, and fractured it close to its head. He did not apply for several days after the accident. At the end of some weeks the fracture was not re-united: and the lower (proximal or distal?) end of the bone stood so much out that its sharp edges constantly irritated the soft parts, and the patient could not move his arm, as the slightest motion caused intolerable pain. To remedy this, the point of the lower (proximal or distal?) fragment was separated from all the surrounding soft parts, and a considerable portion sawed off, in order to form an artificial joint. The operation succeeded perfectly. After the healing of the wound, the use of the arm was restored, with little difference from the sound arm.'—(*Gerson and Julius's Magazine, July and August 1825.*)

IX. *Account of an Epidemic Disease ascribed to Rye-Bread.*

'DURING September, October, and November 1825, the disease appeared among the convicts in the New York Penitentiary, which affected sixteen women and eleven men. The prisoners were fed on rye-bread, and the keeper observed that what they had been using for about three or four weeks before the disease made its appearance, contained a much larger proportion of spurred rye than he had ever seen; but as he considered it perfectly innocent, he did not take the trouble to separate it. Mr. King, the surgeon of the penitentiary, however, thought otherwise; the use of the flour was accordingly immediately discontinued; and although during the fortnight after this, two or three cases occurred, it then totally disappeared.

'The usual course of the disease was as follows. Small discoloured livid spots first made their appearance on one or both of the lower extremities, generally about the foot, unattended at first by any local pain or uneasiness, or any general indisposition. After an interval of a few days these spots would become more numerous, and extend up to the knee. They would now become painful, and

in some cases the patient would lose entirely the use of the lower extremities. During the whole of the disease the pulse was feeble, and generally about 100 per minute. The face usually had a peculiar livid appearance, by which the patients could, in many instances, at first sight be recognised. No unusual heat of skin was present; and the tongue was slightly coated, and very flabby. In several cases there was considerable disorder about the mouth; and in two or three, hæmorrhage from the gums. The bowels were generally regular; in no case was there diarrhœa present. The urine also appeared natural in quantity and quality. The spirits of the patients did not seem at all affected, and their appetites continued good throughout the whole course of the disorder. In all the fatal cases, death was preceded by severe colicky pains in the bowels. The usual duration of the disease was about four weeks. The women and the old people seemed most affected by the disease. Of thirty-two cases, the whole number that occurred, ten proved fatal. The following is the only dissection which was made:—

‘The subject, upon examination, presented an unusual deposition of adipose substance upon the inner parietes of the abdomen. The greater epiploon, however, was shrivelled, and very dark. The liver was healthy, and the gall-bladder full of bile. The uropoietic viscera were sound, and the kidneys secreted their due proportion of urine. The intestines were found studded with dark livid spots, which presented themselves in greater abundance upon the larger intestines, traversing the transverse arch of the colon to its descending portion. The sigmoid flexure and the rectum were studded with one continued series of dots. A portion of the duodenum was likewise diseased. The stomach appeared inflamed with a discoloration upon the under and larger portion. The pancreas and spleen presented nothing unnatural.

‘The subject examined was a female; and from a knowledge of the cause being supposed to produce its specific action upon the uterus, that organ was more particularly examined. It appeared quite natural, of its ordinary size, and perfectly healthy.

‘In treating the patients, bark and wine, carbonate of ammonia, and nitrous vinegar, were the remedies principally used. Bark and wine seemed to be the most efficacious. Opium was given as circumstances required, to alleviate pain and procure sleep.’—(*New York Medical and Physical Journal* for 1825, p. 493.)

X. *On the Marks by which the real King's Bark (Cortex Chinæ Regius) may be distinguished from the Carthagena Bark, (Cortex Chinæ Flavus).* By Dr. G. H. STOLZE, Professor of Pharmacy at the University of Halle.—(*Berlinisches Jahrbuch für die Pharmacie und damit verbundenen Wissenschaften*, Herausgegeben von Dr. G. H. STOLZE. B. xxvii. H. 2. Berlin, 1826.)

‘THE appellation *Cortex Chinæ flavus* is, even up to the present time, used for several kinds of bark, and in order to prevent the

confusion naturally arising from such a practice, Dr. Stohs recommends this term to be rejected, and to call the bark which is generally understood under that name, the Carthagena bark. As the genuine king's bark has for some time past very much increased in price, and is now six times as dear as the Carthagena bark; this last sort is generally substituted for it. But they are very easily distinguished from one another,—the first (*Cortex Chinæ regius*) has a much more bitter taste than the second; when large pieces of the bark are met with, having the epidermis on them, they cannot be mistaken one for the other. The rind of the king's bark is of considerable thickness, and the epidermis, when not covered with lichen, is of a dark brown colour, and the red fibres of the bark may be seen glistening through. The external rind of the Carthagena bark is, on the contrary, very thin, and always covered with dirty-white and ochre-yellow spots, which, on the other bark, are never observed. When the rind is taken off, the Carthagena bark has also a much lighter colour.

'In the same journal is a paper from Professor Sprengel, in Halle, on the tree from which the Peruvian balsam and the balsam of Tolu are obtained. Both balsams come from the same tree, *Myrospermum frutescens*, Jacq., which, probably, on account of the different situations in which they grow, produce different kinds of balsam; when growing in New Grenada, affording the balsam of Tolu, and when in Peru the Peruvian balsam. The different species of *Tolui-fera*, *Myroxolon*, and *Myrospermum*, are all joined in the *Myrospermum* of Sprengel.'

XI. Case of Spontaneous Depilation.

THE following singular example of this affection, the probable production of disease, although unaccompanied by any manifest disorder of function, is related by Mr. Carson, of the Edinburgh Infirmary, in a letter to the Editor of the Edinburgh Journal of Medical Science.

'Mr. J. H. in B——, county of Cumberland, unmarried, ætat. thirty-five. The patient is a strong-built, muscular man, fully six feet in height, free from either local or constitutional disease, excepting that which I am about to describe. Some years ago, had one or two slight attacks of pleuritis, which were readily subdued by the common mode of treatment, without leaving any bad effects; and, with the exception of those, has always enjoyed an excellent state of health; and, up to the present time, been actively employed in agricultural pursuits.

'He is so completely denuded of hair, that, after the minutest search, I was unable to find even the vestige of one upon any part of his head, body, or extremities, even the supercilia, vibrice, and pili auriculares, have entirely disappeared,—whilst his skin is of a healthy colour, and free from the smallest perceptible irregularity of surface. When examined upon the circumstances connected with the first appearance of the disease, he stated that the hair of his

head was always of a lightish cast; his beard, whiskers, &c. reddish, and that every where it was particularly plentiful and strong. This I can myself confirm, recollecting to have seen him about a year ago in his usual good state of health, when, even upon the backs of his hands, it seemed to be more abundant and stronger than in most people.

‘States, that he observed it first when shaving, on or about the 14th of March, 1826, in the appearance of a small bare spot over the buccinator muscle of the right cheek; and that, as he continued to shave, the hair, instead of being cut smooth with the surface, for the most part came away by the roots, and in such quantity, that, after having shaved a few more times, he had not a hair left upon his face. On the same 14th of March, he went to a person in the neighbourhood for the purpose of having his hair cut. The individual whom he employed to do so observed a small bared spot over the transverse ridge of the occiput on the right side, which, from that day forward gradually extended, till, before the middle of May, he was so totally denuded as not to have a solitary hair on any part of his frame. During the progress of the disease, he did not experience the least pain, sickness, or uneasiness, excepting what arose from the disagreeable inconvenience of the hairs falling into his victuals, &c. upon the smallest motion.

‘Another no less remarkable feature of the case is, that the finger-nails seem to participate of the general disease; as, though they have not actually dropped out, yet they are shrunk and withered, and appear not to receive any nourishment by their roots: at the same time they are of a whitish colour, brittle consistence, and very ragged at their extremities. This appearance did not present itself till perhaps three months after the loss of the hair; and, what is singular, only the finger-nails are thus affected, whilst those of the toes retain their natural colour and consistence.

‘The head perspires so freely that it is always moist, whilst there is no perceptible perspiration upon any other part. For the last three months he has worn a wig during the day, and a warm cap at night; but, whether the wig be on or off, the perspiration over the whole surface of the head is the same.

‘Previous to November 1825, he was accustomed to partake freely of spirituous liquors, (though by no means what is generally called a drunkard); but about that time, having taken some dislike to spirits, he all at once and entirely refrained from them: he, however, still continued to take strong ale, and perhaps even in greater quantity. In this consisted the sole difference of his regimen or way of living from what it had always been. About the month of June last, however, some one having told him that his abstinence in this respect was the cause of the hair falling away, he again began to take spirits as before,—freely, but not immoderately.

‘This case seems interesting in a variety of points of view, the denudation having been so complete, without being either preceded or accompanied by any other discernible disease, whether cutaneous or internal; for which reason it would be very difficult indeed to

rank it with any class hitherto described. As a consequent of fever, &c. we certainly meet with frequent instances of partial baldness on the head and other parts of the patient, but still there is a very marked difference between these and the case under consideration; because, in the former, though a considerable portion of the hair fall out, yet it is more than probable that the roots remain,—at all events, the secretive functions are not totally destroyed, as they evidently are in the peculiar instance before us. The nearest approach to it that we can find in those medical authors who have treated on such subjects, is in the second class and fifth order of cutaneous diseases, according to the arrangement of Willan and Bateman. The latter, under the denomination of *Porrigio Declavans*, in the above second class, gives an explication of what to him appears to be the cause of partial baldness; but the principles there advanced are by no means applicable here, as he seems to infer that the modification of the disease there treated of, chiefly occurs in children, and that there are some remains of the roots, though the hairs have disappeared. When it supervenes as a sequel of fevers, scarlatina, &c., we may perhaps attribute it to the increased action of the vessels of the cutis, which induces a morbid enlargement of the cuticle, at the same time that the structure which secretes the hair suffers a privation of blood, and, consequently, of nourishment, so long as the cutis remains in an inflammatory state, and the hair drops off;—not being adequately supplied with that proportion of fluid which is furnished by the healthy performance of the secretive functions. However, in the case under consideration, it would be very difficult to apply this principle, by reason of the total absence of every thing like inflammatory action, either in the cutis vera, or elsewhere.

‘Bateman’s theory of an eruption of minute *achores* about the roots of the hair, without perceptible discharge, approaches nearer in appearance to the present case than any thing we have been able to meet with. Still, how are we to account for the continuance of the disease, and the wasting of the finger-nails, whilst the toe-nails retain their usual healthy colour and consistence?

‘As there was no alteration of regimen, excepting the abstinence from spirits already mentioned, it becomes a question of very material import, whether, or how far, the patient’s constitution, and more especially the parts concerned in secreting the hair, might thereby be influenced; and whether it can happen that a supply of spirits, after having been pretty regularly and abundantly kept up for some considerable period, should become so indispensably requisite to the right performance of the secretive functions, as, on being withheld, to entirely obstruct one of such consequence as the formation of the hair.

‘With the advice of a gentleman of this city, who stands high in his profession, I have prescribed a plan of treatment with a view to the removal of the disease, and, consequently, to the reproduction of the hair; but, not having received accurate information whether the course advised has been properly adhered to, I shall postpone

entering into any detail regarding it just now: however, should any thing of consequence occur respecting the event of the case, it shall be punctually attended to, and accurately stated in a subsequent Number of the Journal.

XII. *Dysmenorrhœa.*

In a long communication under this head, to the new Edinburgh Journal, by Dr. Campbell, in which a great number of ancient and modern authors are rather too laboriously quoted to prove the very common circumstances of pain sometimes attending menstruation, and of vomiting of blood being occasionally an attendant of amenorrhœa, we find some remarks on the membrane discharged from the uterus in certain examples of painful menstruation. Dr. Campbell has never found this membrane produced in a perfect form, except in married females, and after having missed one or two menstrual periods. Unmarried females will sometimes throw off small thin portions of a sort of cutaneous texture, not larger than a finger-nail, or even presenting distinct fibres. It would appear that those married females in whom this affection is habitual, generally conceive if they miss doing so during one menstrual period. The following is Dr. Campbell's attempt to account for the formation of the membranes in question:—

‘When the catamenia are prematurely suppressed, whether from exposure to cold or any other cause calculated to have this effect, congestion and ultimate excitement of the villous membrane lining the uterus are the results. The extremities of the secerning vessels terminating on this villous lining suffer a degree of contraction, and give rise, from their having become less permeable, to excruciating pain at the ensuing menstrual period. From the resistance which must be thus opposed to the transmission of the catamenia, increased action of the capillary vessels ensues, followed by an exudation of coagulable lymph, which is converted into a crust or membrane lining the inner surface of the uterus, and constitutes another impediment to the flow of the secretion, by blocking up the mouths of the secerning vessels. When the catamenia are again about to manifest themselves, the uterus is excited into violent action to accomplish the detachment of the new membrane, the subsequent ejection of which explains the nature of the cutaneous-like fragments observed in the catamenia. By the frequent repetition of these sufferings, a thickening and chronic state of excitement of the inner membrane of the uterus is produced, which must act as a permanent obstruction to the free transmission of the menses.’

This theory may not be very improbable, but no part of it can be considered as proved. What proof have we, for instance, when the catamenia are suppressed from cold, or other accidents, that there is congestion in the villous membrane of the uterus, and ultimate excitement? It is not even, we should say, commonly observed that the formation of the membrane follows suppression: it accom-

panies painful menstruation. Nor do we understand that Dr. Campbell has really detected the thickening and chronic state of excitement of the inner membrane of the uterus, which is supposed to be ultimately produced: it does not even appear that repeated formations of membrane are followed by the complete obstruction to the free transmission of the menses spoken of in the conclusion of the above extract.

In the treatment of dysmenorrhœa recommended by Dr. Campbell, the principal novelty we find is his recommendation of *waltzing*, in preference to other forms of dancing; on what principle we cannot divine. He also prefers camphor and assafœtida to opium or hyoscyamus, for the relief of pain. It is greatly to be regretted that a gentleman of Dr. Campbell's practical experience should have adopted modes of expressing himself, (when speaking of the most delicate and distressing diseases to which the weaker sex is liable), the most irreconcilable to good taste that can possibly be imagined. His allusion to the French women, and to the young lady who was alternately 'heartily ducked' and 'stewed in a warm bath,' and made to 'swallow' carbonate of iron instead of oatmeal, 'because the lady's catamenia had not made their appearance,' are sufficient to justify this censure. Dr. Campbell is a frequent contributor to periodical literature, and evidently has no desire to be neglected; but surely the ladies of the Scottish metropolis are not to be won by words like these.

XIII. *Upon the Pathological Anatomy of Elephantiasis.*

By M. ANDRAL, fils.

* SINCE the publication of the interesting works of M. Gautier and Dutrochet upon the structure of the skin, the existence of the different layers which they admit between the epidermis and the skin has been repeatedly confirmed, both in the negro, and in other animals; but this has not happened with respect to the white races, and many persons deny the presence of the rete mucosum in these last. I have, however, had the opportunity of observing one case in which all the three layers were distinctly developed. It must not be imagined that the layers referred to had been created by disease; for the more we advance in the knowledge of morbid anatomy, the more shall we be convinced that there are few tissues (excluding from this term the morbid secretions) which may not be rendered more apparent by disease; the nutritive function being more active. As some proof of this, it may be remarked that the parts which are thus manifested by diseased processes in man are visible in the healthy state in other animals; as one instance of which, we may refer to the fibres of the walls of the gall-bladder. The following case is interesting, as proving that morbid anatomy may conduce to the knowledge of the anatomy of healthy parts, and, on the other hand, ensure more satisfactory results in pathological investigations:—

'A woman, seventy-four years of age, died of phthisis, in La Charité

She had formerly had an ulcer in the right leg, but which had been healed for thirteen years, and the limb had become extraordinarily enlarged. The right leg was swelled and hard, and the skin wrinkled, and of a brown colour, like that which is observable on the external edge of the hand in negroes. In some places it was nearly black. The arteries and veins were healthy. The subcutaneous and intermuscular cellular tissue were remarkably developed, and even indurated. It had the strictest resemblance to the structure in the parietes of the stomach when it has become scirrhus. As we approached the cutis it became more and more dense; the cutis itself was considerably increased in thickness, and in many parts it was impossible to establish a line of demarcation between the thickened cutis, the aponeurotic filaments which terminated there, and the indurated cellular tissue, which lies upon its internal surface; all these parts appear to be different stages of the same structure. The skin was neither injected nor modified in its colour. Upon the skin the papillary body was remarkably manifested in many parts, and which, commonly confounded with the skin, had here a separate and independent existence. Immediately upon the papilli were three layers, which were all more or less distinct, according to the parts in which they were examined; and, lastly, upon these was the cuticle.

‘The papillary body (*bourgeons sanguins* of M. Gautier) had, in many points, only its usual dimensions; but, elsewhere, the small cellulo-vascular bodies which constitute it had undergone such an elongation that they might easily be taken for the whitish filaments which are found upon the lingual and buccal mucous membrane of many birds. Between these filaments, united in groups, a whiter and denser tissue was interposed, which was prolonged on the one part into the cutis, and on the other into a white body, which will be described below, and which serves to separate the papillary body of the skin from the rete mucosum. The papillary body was readily separable from the chorium, properly so called.

‘Upon the papillary body, and between it and the epidermis, three very distinct layers were found, but unequally developed. The first, proceeding from within outwards, had the appearance of a thick white line, dipping into the intervals of the papillary body. No vessel ramified upon it, and it appeared to be formed of a cellulo-fibrous tissue. It was not every where equally distinct. This was the *couche alvide profonde* of M. Gautier.

‘Above this layer was another of a brown, black, or gray colour, in different parts. Viewed by a vertical section of the skin, a colouring matter of different shades was seen, and nothing else. By an oblique section it had the appearance of a network, composed of infinitely delicate black filaments, crossing each other in innumerable directions, and leaving transparent intervals, by which the subjacent white parts were rendered visible. This network was evidently analogous to the coloured layer in negroes.

‘In many points the epidermis seemed to cover immediately the ayer just described; but in others a new layer was seen, which

Interposed between the coloured layer and the epidermis. In some places it had considerable thickness, and acquired, at the same time, a great hardness, a real horny consistence, and occasionally was formed of a series of imbricated scales. Sometimes it was but a simple white line, analogous to the epidermis of the papilli. It is manifestly the *couche albide superficielle*, superficial white layer, of Gautier. Over the whole was the epidermis.'—(*Revue Médicale*, *Fevrier* 1827.)

XIV. Rupture of the Duodenum.

M. BERNARD FILIOCA, aged 48, having dined on French beans, meat, and apple-omelette, went to a coffee-house to play billiards, and drank some beer and punch: he had a quarrel while there, and was much exasperated. When he was going away, accompanied by one of his friends, he suddenly complained of great pain of the stomach, which increased, and became so violent that he could not stand: he was carried into the shop of a *pharmacien*, and an antispasmodic was administered; of which he had scarcely swallowed a few spoonfuls, when he was seized with vomiting, and had a copious alvine evacuation. It was remarked that his extremities had become suddenly cold. He was carried home, and M. Dupuy was sent for, who found him lying on the bed, his limbs were very cold (*glacés*), and he complained of violent pain in the epigastrium, and heaviness in the lower part of the abdomen, with a desire to go to stool. Some tea and an enema had been given to him. Notwithstanding his efforts, there was no evacuation from the bowels. M. Dupuy could not perceive any pulsation in the radial or carotid arteries, nor in the heart; yet the face of the patient was not discoloured, and he described his sensations with precision. He made another effort to relieve his bowels by stool, lay down again, and said he felt better: his respiration was very calm: it gradually became slower, and he died without a sigh.

The body was examined the next morning. There were large ecchymoses in all parts of the body; the lungs were engorged; there were adhesions of the pleura; the heart was large, and very fat, the aorta a little dilated. Gas and a greyish liquid were found in the abdomen: the liver was enormous, and gorged with blood; the gall-bladder empty; there were traces of inflammation in the stomach. The mucous membrane of the stomach was very much inflamed, and about four inches and a half from the pylorus there was a transverse rent, extending to about a third of the circumference of the intestines, and situated on its convex part: the parietes of the small intestines were very thin throughout: the other organs were healthy.—(*Bull. de Sc. Med. from the Journ. Med. de la Gironde*, *Sept.* 1826.)

XV. Artificial Nose.

THE operation of Mr. Carpué for the formation of an artificial nose

was not long ago performed by M. Lisfranc, of Paris, with every appearance of success.

XVI. *Amputation of the Neck of the Uterus.*

THE same enterprising surgeon performed the operation of amputating the neck of the uterus some time ago. The patient did well, and has been pregnant; (she is reported to have become so a fortnight after the operation!) and been delivered at the full period. The labour did not last more than an hour: her former labours had been very difficult.

XVII. *New Method of detaching the Placenta from the Uterus.*

M. MOJON's new method consists of injecting cold water, slightly acidulated with vinegar, and with some degree of force, into the vein of the umbilical cord, first allowing the vein to empty itself of blood. If a first injection does not succeed, a second is made.—(*Bull. des Sc. Méd.*)

Clinical Report of the most prevalent Diseases during the preceding Month.

THERE has been much rain in March, with high winds. Since the twentieth the weather has been much milder.

Rheumatism and inflammations of the lungs have been the principal complaints during this month, and there have been a few cases of continued fever. These last have generally been mild, but in some instances the recovery was very slow. Rheumatism has exhibited nothing peculiar, nor has its character been very inflammatory. It has yielded readily, in most cases, to aperients and the tincture of colchicum.

Inflammation of the lungs has principally prevailed among children, and the fatal cases have been numerous. As usual with this disease in young persons, affections of the head have frequently supervened; and this second disease has, in every instance within our knowledge, terminated badly.

Measles have again been common in some districts, and among the poor, who have seldom applied for relief during the disease itself. The sequelæ that have hitherto fallen under our notice, have been easily removed, but the patients have always been seen within a fortnight from the disappearance of the eruption. The great source of the inconvenience following measles, is evidently the too early return to ordinary diet, and not unfrequently the custom of giving wine. As the disorders are always of an inflammatory nature, nothing can be more injudicious. We have applied leeches to the bowels or chest, according as the complaint of either organ predominates; generally speaking, the bowels are most affected, and the pulmonary disorder disappears spontaneously after the other has been overcome. Aperients are always advisable, unless

there is much purging; but the reports of friends can be little relied on. Tenesmus is nine times out of ten mistaken for purging.

We have seen one instance this month of the power of musk in subduing an epileptic paroxysm. The patient, a young man of nineteen, has been subject to these fits for several years. By aperients and the nitrate of silver (five grains of the latter three times a day), we had previously succeeded in prolonging the interval. He had generally the notice of some hours before an attack, and when this threatening the last time but one appeared, he took three half-drachm doses of musk, which had the effect of removing all the symptoms. A second attack has been suspended by the same means.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. Observations on the Expediency of Instituting a Friendly Association of the Medical Profession throughout Scotland, for Insuring a Provision during Sickness and Old Age, Widows' Annuities, Endowments for Children, &c. By Edward D. Allison, Surgeon. With a Prospectus of 'The Medical Provident Institution of Scotland.'

We intended to have offered some observations upon this Pamphlet and Prospectus; but we have deferred doing so, that we might obtain additional information. There can be no question of the general usefulness of these Institutions; and did not daily experience prove to us the contrary, we could scarcely believe any men so careless of their families as to neglect the means of providing for them which such associations afford. With respect to the establishment now proposed, we wish to know whether it is intended to confine it to Scotland? upon what grounds the calculations are formed? and whether it is known that the medical body is sufficiently numerous to support it alone. The advantages offered are certainly greater than can be obtained elsewhere; our only doubt is, whether they are not too great. We shall be obliged to Mr. Allison for all the information he can give us upon the subject.

2. Appendix to the Papers on the Nerves, republished from the Royal Society's Transactions: by Charles Bell: containing Consultations and Cases, illustrative of the facts announced in those Papers. London, 1827.

3. A Clinical Lecture delivered to the Students of Surgery in the Royal Infirmary of Edinburgh, at the conclusion of the Winter Course for 1826-27. By George Ballinghall, M.D.

4. Psychological Speculations. Essay I. The Theological Department of Psychology, &c. Pp. 52. London.

5. Medical Botany. By John Stephenson, M.D., and James Moss Churchill, Esq. No. III.

6. Reply to the 'Additional Strictures' contained in the first Number of the Quarterly Medical Review, &c. By Leonard Koecker. Pp. 35. London, 1827.

It was scarcely worth Mr. Koecker's while to notice these Strictures. The ungentlemanly tone in which they are written sufficiently exposes their object, and was sure to defeat it.

7. Histoire Anatomique des Inflammations. Par A. M. Gendrin. Tom. 2. Pp. 645. Paris, 1827.

8. The Life of Jenner, M.D., F.R.S. By John Baron, M.D., F.R.S. Pp. 624. London, 1827.

THE METEOROLOGICAL JOURNAL,

From the 20th of FEBRUARY, 1827, to the 19th of MARCH, 1827.

By Messrs. HARRIS and Co.

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| February. | Moons. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|-----------|--------|-------------|--------|------|------|--------|---------|------------------|---------|--------|---------|------------------|--------|---------|
| | | | 9 A.M. | Max. | Min. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 2 P.M. | 10 P.M. |
| 20 | | | 28 | 32 | 32 | 29 | 56 | 29 | 54 | 82 | 80 | ENE | NE | Fine |
| 21 | | | 34 | 38 | 32 | 29 | 53 | 29 | 61 | 89 | 87 | NE | ENE | Cloudy |
| 22 | | | 35 | 39 | 25 | 29 | 75 | 29 | 87 | 84 | 78 | N | NNW | Fair |
| 23 | | | 32 | 38 | 29 | 29 | 93 | 29 | 89 | 74 | 72 | W | SW | Foggy |
| 24 | | | 35 | 40 | 26 | 29 | 84 | 29 | 92 | 75 | 76 | NE | ESE | Foggy |
| 25 | ● | | 34 | 40 | 34 | 30 | 04 | 29 | 95 | 79 | 77 | SE | SSE | Fine |
| 26 | | | 38 | 50 | 47 | 29 | 73 | 29 | 65 | 92 | 85 | S | WSW | Rain |
| 27 | | | 50 | 54 | 36 | 29 | 39 | 29 | 57 | 94 | 92 | WSW | W | Cloudy |
| 28 | | | 37 | 49 | 49 | 29 | 56 | 29 | 31 | 98 | 98 | ESE | SW | Rain |
| | | | | | | | | | | | | | | |
| 1 | | | 50 | 44 | 44 | 29 | 23 | 29 | 34 | 82 | 97 | SW v. | SW | Cloudy |
| 2 | | .16 | 47 | 48 | 39 | 29 | 17 | 29 | 42 | 97 | 87 | SSW | SSW | Rain |
| 3 | | | 45 | 48 | 43 | 29 | 35 | 29 | 03 | 90 | 92 | SW | ESE | Cloudy |
| 4 | | | 46 | 49 | 33 | 28 | 71 | 29 | 20 | 92 | 83 | SSW | SW v. | Cloudy |
| 5 | ☾ | | 35 | 45 | 44 | 29 | 62 | 29 | 21 | 83 | 92 | WSW | SW v. | Fair |
| 6 | | .24 | 49 | 51 | 39 | 28 | 97 | 28 | 98 | 91 | 81 | SW | NWS | Rain |
| 7 | | | 40 | 51 | 43 | 29 | 43 | 28 | 94 | 87 | 95 | SW | S | Overc. |
| 8 | | | 46 | 51 | 34 | 28 | 79 | 29 | 10 | 84 | 78 | SW | WNW | Cloudy |
| 9 | | | 37 | 41 | 32 | 29 | 30 | 29 | 35 | 80 | 83 | NW | ENE | Fair |
| 10 | | | 41 | 45 | 37 | 29 | 66 | 29 | 69 | 78 | 78 | ESE | SSE | Fair |
| 11 | | | 50 | 56 | 47 | 29 | 44 | 29 | 40 | 87 | 95 | SW | SW v. | Cloudy |
| 12 | | | 49 | 55 | 46 | 29 | 56 | 29 | 81 | 88 | 87 | W | SW | Fair |
| 13 | ○ | .8 | 50 | 56 | 44 | 29 | 74 | 29 | 62 | 88 | 95 | NW | WSW | Fine |
| 14 | | | 48 | 51 | 43 | 29 | 65 | 29 | 84 | 77 | 82 | NW | W | Fair |
| 15 | | | 45 | 48 | 35 | 29 | 50 | 29 | 71 | 87 | 78 | W | WNW | s. Rain |
| 16 | | | 40 | 48 | 43 | 30 | 01 | 29 | 76 | 80 | 92 | W | SW | Fair |
| 17 | | | 47 | 47 | 34 | 29 | 25 | 29 | 65 | 85 | 83 | WNW v. | WNW | Rain |
| 18 | | | 40 | 44 | 32 | 29 | 92 | 30 | 12 | 75 | 77 | NW | NNE | Fair |
| 19 | | | 40 | 45 | 43 | 30 | 20 | 30 | 19 | 77 | 84 | W | SW | Clo. |

NOTICES TO CORRESPONDENTS.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

•• Communications, and Works for Review, are requested to be addressed (post paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 38 Fleet Street.

THE LONDON MEDICAL REPOSITORY AND REVIEW.

No. 161.

MAY 1, 1827.

VOL. XXVII.

No. XXIII.—NEW SERIES.—VOL. IV.

PART I. R E V I E W.

I.

LIFE OF DR. JENNER.

The Life of Edward Jenner, M.D., LL.D., F.R.S., &c. By JOHN BARON, M.D., F.R.S. Pp. 624. London, 1827.

THE advantages derivable from biography have been so frequently alluded to in this Journal, that it must at least be superfluous to insist upon them again. While, however, the lessons afforded by the history of eminent men have, in common, the excitement of active and intelligent minds to the pursuance of similar labours, and the attainment of still higher acquirements, every individual case is distinguished by peculiar circumstances, which render it instructive indeed to all, but instructive to some particularly above others. Were we to select a biographical work, which strikes us as more generally applicable, we know not if any could be fixed upon so deserving, on this very account, of attention, as the *Memoirs of Dr. Jenner*. The circumstances of his life were no farther different from those of the great mass of country practitioners, than as they were rendered so by his intelligence and his exertions: and the dull monotony of a country practice was less felt by him than the common herd, because his mind was incessantly active in the investigations of science, or in attending to the calls of benevolence.

But, in considering the life of this very excellent individual, it would appear that we have a debt to pay no less than the

VOL. IV. NO. 23.—NEW SERIES.

3 c

instruction which is afforded. The name of Jenner, associated as it is with the most admirable discovery of medical science, and known as the title of the greatest benefactor to mankind, has scarcely taken its place among the higher class of philosophers of his country; and by many, we know him to have been regarded rather as a very fortunate than as a very able man. It is high time that this grievous error should be corrected, and that he should appear, as he really was, an able, industrious, and successful disciple of the Baconian school. And there is yet another point in which this great character is well worthy the imitation of the cultivators of science—he was not only a great, but he was a pious man; and he has left us a picture of his own mind, while the vaccine discovery was progressive, not less admirable for the sentiments contained, than for the beautiful simplicity of language in which they are expressed. It, indeed, in this respect bears a close resemblance to the composition of Bishop Horne.

‘While,’ he says, ‘the vaccine discovery was progressive, the joy I felt at the prospect before me of being the instrument destined to take away from the world one of its greatest calamities, blended with the fond hope of enjoying independence, and domestic peace and happiness, was often so excessive, that in pursuing my favourite subject among the meadows, I have sometimes found myself in a kind of reverie. *It is pleasant to me to recollect that these reflections always ended in devout acknowledgments to that Being from whom this and all other mercies flow.*’

Edward Jenner was the third son of the Rev. Stephen Jenner, the vicar of Berkeley, and was born at the vicarage on the 17th of May, 1749. His family was respectable, and possessed considerable property in Gloucestershire, in which county it had long been resident. The father of Dr. Jenner died in 1754, when his son was about four years old, leaving him under the care of his elder brother, the Rev. Stephen Jenner, by whom the duties of a parent were affectionately and faithfully performed. At eight years old, young Jenner was sent to school to the Rev. Mr. Clissold, at Wootton-under-Edge; and afterwards to Dr. Washbourn, of Cirencester. We are informed by his biographer, that his taste for natural history was apparent at a very early period of his life; and that before nine years of age he had made a collection of the nests of the dormouse. When at Cirencester, he was found searching for fossils, and spent much of the time in this employment which is generally devoted by boys to more active amusements. After leaving school, the exact period of which circumstance is not mentioned, he was placed as a pupil under Mr. Ludlow, an eminent surgeon of Led-

bury; and in the twenty-first year of his age went to London, and resided for two years with Mr. John Hunter, with whom he was a great favourite; and the friendship thus began continued uninterrupted to Mr. Hunter's death.

Few people were so well calculated to improve and direct the peculiar talents of Jenner as Mr. Hunter. Always thinking deeply, but never trusting to deductions unsupported by an accumulation of facts, every suggestion of his own powerful mind was brought to the test of experience. 'Do not think, but try,' was the advice he gave to Jenner at a later period of his life, and was the maxim by which both his own and Jenner's investigations were guided. During the residence of Jenner with Mr. Hunter he arranged and prepared a great part of the specimens of natural history that had been collected by Sir Joseph Banks in his voyage with Capt. Cooke, to which employment he was recommended by his preceptor. His power of dissecting and exhibiting delicate structures, was very great; and Dr. Baron states, that in minute injections he was almost unrivalled.

In consequence of the ability with which he performed the task just alluded to, the office of naturalist to the next Expedition was offered him, but he refused it. He appears very early to have determined upon fixing his residence in his native place; and though at different periods of life several very tempting offers were presented to his notice, nothing could induce him to alter his original intention. With as much good taste in the manner of suggesting it, as with good feeling, Dr. Baron observes, 'that possibly in this decision we may now be permitted to trace the agency of a higher power, which induced a young man frequently to reject most flattering prospects of wealth and distinction, that he might be enabled to follow up the leading object of his mind in the seclusion of a country village.' When, indeed, we remember the consequences of this decision, that Dr. Jenner was thus enabled to investigate the *variola vaccinae* in a far more perfect manner than he could have done in more crowded scenes; and that the knowledge thus obtained has mitigated, if not removed, one of the severest and most loathsome diseases which 'flesh is heir to,' it is scarcely possible not to believe that he was guided in his choice by a superior Providence; not by special interference, indeed, but according to that 'ordinary dispensation' by which every thing appears to be directed for the progressive improvement and happiness of man.

Jenner continued his studies with great ardour after settling at Berkeley; and in a short time collected numerous specimens of comparative anatomy and natural history.

He contrived also to unite, to a very considerable degree, the pleasures of social intercourse with the active duties of his profession. For this end he was accustomed to spend a few days at the houses of some of his particular friends, who resided at short distances from Berkeley; and for a season made them his head-quarters. The cottage is still standing, near Eastington, where, on one of these sojournings, he prepared his paper on the Cuckoo for publication. His appearance and manner at this period of his life are thus described, in a communication from one of Dr. Jenner's earliest friends to Dr. Baron.

‘His height was rather under the middle size; his person was robust, but active, and well formed. In his dress he was particularly neat; and every thing about him shewed the man intent, and serious, and well prepared to meet the duties of his calling.

‘When I first saw him it was on Frampton Green. I was somewhat his junior in years, and had heard so much of Mr. Jenner, of Berkeley, that I had no small curiosity to see him: he was dressed in a blue coat, and yellow buttons, buckskins, well-polished jockey boots, with handsome silver spurs; and he carried a smart whip, with a silver handle. His hair, after the fashion of the times, was done up in a curl; and he wore a broad brimmed hat.

‘We were introduced on that occasion, and I was delighted and astonished. I was prepared to find him an accomplished man; and the country spoke of him as a skilful surgeon, and a great naturalist; but I did not expect to find him so much at home on other matters. I who had been spending my time in cultivating my judgment by abstract study, and smit from my boyhood with the love of song, had sought my amusement in the rosy fields of the imagination, was not less surprised than gratified to find that the ancient affinity between Apollo and Esculapius was so well maintained in his person.’

Friendship may perhaps have slightly overcharged this picture; yet from the great attachment of his friends, and the high reputation which many of them enjoyed, we can scarcely question that Dr. Jenner possessed very entertaining, and very varied acquirements. With a mind like his, feelingly alive to all the beauties of nature, and residing where these beauties were perpetually presented to his view, it was scarcely possible that he should not sometimes have sought to give his feelings vent in the language of poetry. There are, indeed, few persons so void of imagination by nature, who would not occasionally thus indulge in versifying, were they favourably placed for the development of fancy; but the busy scenes of a city life, the stern reality almost ‘too real,’ which is impressed upon every surrounding object in a crowded town, the dull monotony of its streets, over which the varying shadows of the morning, noon, and evening sun,

throw no pleasing and scarcely different hues, and the constant pressure of serious business, leave neither time nor inclination for such indulgence. The poetical talents of Jenner were not very powerful, and perhaps in any other situation would not have been manifested; but the specimens published by Dr. Baron are all of them pleasing, and exhibit extraordinary observation of the habits of animals, and plants, and the general appearances of nature under certain circumstances. A few lines taken from a poem upon the 'Signs of Rain' will well illustrate this remark. The poem itself contains about fifty lines; and every couplet, and many single lines, contain fresh indications of rain.

'The hollow winds begin to blow,
The clouds look black, the glass is low;
The soot falls down, the spaniels sleep,
And spiders from their cobwebs creep.
Last night the sun went pale to bed,
The moon in halos hid her head,
The boding shepherd heaves a sigh,
For see! a rainbow spans the sky,' &c. &c.

His epigrams, of which five instances are published, are neither better nor worse than other people's; the very best are poor; nor have the ablest poets succeeded much better in this style of composition than the most contemptible.

Music, also, formed one of Dr. Jenner's amusements; and he could play both on the violin and flute. Few indulgences require perhaps more constant vigilance that it does not press upon the more serious and important business of life, than a fondness for music; yet none surely is more innocent in itself, nor more calculated to excite the better feelings. But its fascinations are so powerful, and seem so thoroughly to enchain, as it were, the whole soul of those individuals upon whom nature has conferred a musical talent, that we scarcely know whether to rejoice that we ourselves are freed from temptation, or to regret that one of the most prolific sources of pleasure is closed against us. Jenner employed music as a relaxation from his professional cares, and reaped all the gratification it can afford,—unalloyed by the reflection, that any real duties had been neglected in its excessive indulgence.

Of cards, his biographer states, he entirely disapproved,—'both because they interfered with a much more instructive employment of time, and often led to evils of a much more serious nature.' In the sweeping nature, however, of this remark, we can hardly unite. The interference of cards with a more instructive employment of time can only be objected when there is excess. The mind cannot always be exerted at

its full strength ; and there must be relaxation of some kind. After all, however, other amusements are on many accounts preferable ; and though we cannot join in a wholesale condemnation of them, there is too much tendency in card players to become gamblers, to render any laboured defence at all advisable.

From the period of his settling at Berkeley in 1772 or 3, till a short time previous to Mr. Hunter's death, these great men appear to have maintained a constant epistolary intercourse. Many of Mr. Hunter's letters are published in the volume before us, and afford additional proof, if proof were yet wanting, of the indefatigable activity of his mind. Jenner assisted him in his inquiries in natural history. Most of the letters refer to some points connected with this subject, and afford limits for additional researches. It is no slight testimony of Jenner's talents, and the high estimation in which he was held by Hunter, that the latter proposed to him a plan of coadjutorship in teaching natural history. It is sufficient to state, that Jenner declined the proposition. His answers to Hunter have all been destroyed ; but whether by Hunter himself, or the honourable conflagrator of his papers, is not mentioned. In one, however, of Mr. Hunter's letters, there is a remark which makes this destruction doubly lamentable. He was in the habit of having every circumstance transcribed from the letters of his correspondents, which was at all new to him. In the letter just referred to, he says, ' I have just now forgot the case of the hydatids ; but if there was any thing that struck me, I dare say that it was laid by.' The information thus accumulated must have been very voluminous ; but where the collections in which it was contained are gone, we are ignorant.

While adverting to this subject, we cannot but remark upon the good taste with which Dr. Baron has avoided any particular reference to the disgraceful spoliation of Mr. Hunter's papers from the College of Surgeons. In this forbearance, however, we see no reason for uniting ourselves ; and we do not hesitate to say, that it was one of the most dishonourable breaches of trust with which we are acquainted. The individual who was capable of committing so flagrant an act, ought immediately to have been expelled from the council of the College. No excuse can justify the surreptitious removal and destruction of such papers, if indeed they are destroyed.

Dr. Jenner applied himself to general practice till 1792, at which time he obtained a degree from St. Andrew's, and confined himself afterwards to medical practice only. During the twenty years that elapsed between his settling at Berkeley, and taking out his diploma, his mind was frequently engaged

on the subject of cow-pox, and other objects of medical philosophy. As some proof of his pathological knowledge, it may be mentioned, that he was not only very early aware of the nature of Mr. Hunter's disease, but had repeatedly mentioned his suspicions of the anatomical derangement, upon which in some measure at least the symptoms are dependent. There is a letter written by Dr. Jenner to Dr. Heberden so early as 1778, but which was not sent, in which his opinions are contained. Our readers are well aware, that in Mr. Hunter the coronary arteries were found considerably ossified, as had been suspected by Jenner.

Sometime about the year 1778 he was instrumental in forming a society, of which Dr. Parry, of Bath—Dr. Hicks, of Bristol—Dr. Ludlow, of Corsham—and Dr. Mathews, of Hereford, were members. At one of the meetings he read his paper on Angina Pectoris, which afterwards was enlarged upon by Dr. Parry. He also read a Treatise on Ophthalmia, of which Dr. Baron speaks favourably, though he does not compare it with the more complete works of the present day. The meetings of the society in which these papers were read, were held at the Fleece-Inn, at Rodborough.

He was also a member of another medical society, of which the enjoyment of social converse was the principal object. At both these societies he was in the habit of occasionally alluding to the subject of cow-pox; and so repeatedly did he speak of it, that the members became perfectly fatigued, 'and threatened to expel him if he continued to harass them with so unprofitable a subject.' There is, however, no evidence given, that at this time he had obtained any very accurate information respecting it; but it had evidently so far engaged his attention, as to induce him to collect every account of its occurrence that was in his power. After, however, running through the other principal events of Jenner's life, we shall recur to the history of vaccination, and the evidence by which its powers were supported.

Geology was also a favourite study; and he appears to have made 'a large collection of specimens from the oolite and lias formations.'

In 1783, the first ascent in an air balloon was made; and Jenner exhibited one at Berkeley. Even this may be cited as an instance of mental activity; and as a proof, that a mind so alive to what was passing in the scientific world was one of more than ordinary energy and intelligence. There are few persons situated in so retired a spot as Berkeley, who would have done much more than have wondered at, and talked upon this then novel phenomenon.

Among other attempts at this period to improve the means

of his profession, was a new mode of preparing tartar emetic. The method which he adopted will be found in the first volume of the Medical and Chirurgical Transactions. It is different from the process of the Pharmacopœia; and we know not what was its value in practice. It appears probable, however, that it would be more uniform.

Another subject which engaged his attention was the value of animal manure. Some curious experiments made with the serum of human blood, are related in a letter to Sir Joseph Banks; and which, to use his own language, 'though they do not go far enough to determine whether animal manure will produce lasting good effects on vegetables, they prove that a superabundance of this substance is destructive to vegetable life.'

The nature of hydatids was also the object of investigation; and his opinions upon these productions have been stated in a separate work by Dr. Baron.

To form a fair estimate of a mind thus engaged in scientific pursuits, it ought to be recollected, that not only during the whole of this time was Dr. Jenner in very extensive practice, but that the intercourse between London and the country, and between different parts of the country, was far more limited than at the present day; and that consequently there was much less stimulus to exertion. Now, indeed, from the great rapidity with which information of every kind travels, and the much improved education of medical practitioners, it is less rare to meet with well-informed and intelligent members of the profession in very retired situations: but, even at this time, the intellect that does not rust in the country, must have more innate energy than has been bestowed upon the great mass of mankind.

About the year 1777 or 8 he 'experienced some disappointment in his affections, which for a considerable time materially impaired his happiness.' Mr. Hunter refers to this subject in one of his letters,—not perhaps in the strain that a disappointed lover would be best satisfied with; but nevertheless in a manner that evinces a deep observation of human nature; and though the allusion is light, it is not unfeeling.

'I own,' he says, 'I was at a loss to account for your silence; and I was sorry for the cause. I can easily conceive how you must feel, for you have two passions to cope with, viz. that of being disappointed in love, and that of being defeated; but both will wear out, perhaps the first soonest.'

And Hunter was right. Both one feeling and the other subsided. Years rolled on—his affections were again disengaged, and again he fell in love; but this time with more

success. In 1788 he was married to Miss Catherine Kingcote, of whom a very excellent character is given. Of the domestic concerns of Jenner, however, little is told ; but that little induces a belief, that he found at home that comfort and peace, without which the highest rewards of ambition are incapable of affording the slightest enjoyment.

In this year his paper on the Cuckoo, which had engaged very much of his attention, was published in the Philosophical Transactions, and is a striking proof of his accuracy and industry in observing the habits of animals. Dr. Baron has given an analysis of this paper, to which we must refer our readers. It is well worthy their perusal.

During the greater part of his professional life, up to the publication of his Enquiry, the *variola vaccinae* had more or less been the object of investigation. After, however, retiring in 1792 from general practice, he appears to have pursued his inquiries more diligently probably, because more leisure was afforded him.

According to Dr. Baron, the first idea of substituting cow-pox for the variolous eruption, had crossed Jenner's mind when yet residing with Mr. Ludlow at Sudbury. While at this place, a young girl had said in his presence that she could not take small-pox because she had had cow-pox. It was not to be expected, that at so early a period of his professional life he should have entered into the investigation of the laws of the *variola vaccinae* ; but that the observation now mentioned had made a deep impression, is proved by the circumstances of his naming prophylactic virtues of cow-pox to Hunter so early as 1770. In the dairy counties, and particularly in Gloucestershire, there had long been an opinion that the communication of an eruption from the cow to the human subject defended this last ever after from variolous infection. It was, however, but a vague notion, which had never been scientifically examined ; nor did it occur to any of those medical men who were acquainted with the tradition that it might be made a means of eradicating small-pox. The actual inquiry into the nature and laws of the *variola vaccinae* was begun, however, a few years after his return from London ; and so early as 1780 he had acquired so much information upon the subject, that he ventured to announce his opinions and his hopes to an intimate friend in the month of May of this year.

‘ He was riding with Gardner, on the road between Gloucester and Bristol, near Newport, when the conversation passed of which I have made mention. He went over the natural history of cow-pox ; stated his opinion as to the origin of this affection from the heel of the horse ; specified the different sorts of disease, which attacked

the milkers when they handled infected cows; dwelt upon that variety which afforded protection against small-pox; and with deep and anxious emotion, mentioned his hope of being able to propagate that variety from one human being to another, till he had disseminated the practice all over the globe, to the total eradication of small-pox. The conversation was concluded by Jenner in words to the following effect: "Gardner, I have intrusted a most important matter to you, which I firmly believe will prove of essential benefit to the human race. I know you, and should not wish what I have stated to be brought into conversation; for should any thing untoward turn up in my experiments, I should be made, particularly by my medical brethren, the subject of ridicule—for I am the mark they all shoot at."

The difficulties of arriving at accurate information respecting cow-pox were far more numerous and important than now, that all has been acquired, would perhaps be imagined. Among the cows themselves the true variolæ vaccinae were only a casual disease, and considerable intervals would elapse between the appearances of the eruption. Cows also were liable to different eruptions, all of them capable of communication to the milkers, but not all equally prophylactic with regard to small-pox. But, farther, cases of small-pox were found to occur in individuals who had exhibited the true vaccine vesicle.

In overcoming these various difficulties, Jenner exercised uncommon diligence, caution, and sagacity. His first care was to acquire a knowledge of the eruptive diseases of the cow, and to distinguish the genuine from the spurious cow-pox. But when he learnt that small-pox occasionally occurred after the genuine cow-pox, he sought to become acquainted with the circumstances upon which its prophylactic virtues depend. In effecting this, it occurred to him that there might be some precise condition of the vaccine lymph in which its antivariolous power would be most complete; and that if suffered to pass beyond the period at which such condition was attained, its properties would be more or less altered, and finally lost. The result of the investigations pursued upon this supposition completely corroborated the correctness of Jenner's reasoning, and enabled him to lay down those rules, to the neglect of which it is much to be feared that many of the late failures of vaccination have been owing.

The inquiry had hitherto been confined to the casual disease; but on the 14th of May, 1796, it was first communicated from one human subject to another.

'A boy, of the name of Phipps, was inoculated in the arm from a pustule on the hand of a young woman who was infected by her

master's cows. Having never seen the disease but in its casual way before, that is, when communicated from the cow to the hand of the milker, I was astonished at the close resemblance of the pustules in some of their stages to the variolous pustules. But now listen to the most delightful part of my story. The boy has since been inoculated for the small-pox, which, as I ventured to predict, produced no effect. I shall now pursue my experiments with redoubled ardour.'

Such was the language in which Jenner communicated the account of his first inoculation with vaccine matter. We have reason to know that Phipps has been inoculated with small-pox matter at least twenty times, at distant intervals, but hitherto without producing the slightest effect.

Having thus made his first Essay, and found it successful, he repeated his experiments till he had accumulated such a mass of evidence as he deemed sufficient to prove his assertion, 'that the cow-pox protects the human constitution from the effects of small-pox;' and his Enquiry was at length published in June 1798. It 'contained twenty-three cases, detailed at length, illustrative of the progress of the infection. The first sixteen cases were examples of the casual disease; the rest were the result of inoculation. One among the former is of an individual, who, having been infected from the heel of the horse, afterwards completely resisted small-pox contagion. Among the latter is mentioned the case of his second son, Robert Fitzharding Jenner, an infant eleven months old; and of several other children, who were vaccinated on the 12th of April with matter taken from the arm of Hannah Excell. It is particularly specified, *that Robert Jenner did not receive the infection.*'

Some years after Dr. Jenner found it necessary to inoculate this child with small-pox; and the circumstance was made the ground of a report, that he had abandoned vaccination. As, however, the child had *not* received the cow-pox infection, it was clearly no argument against its influence in those individuals who did take it.

In April of the year in which his Enquiry was published, he went to London for the purpose of superintending the first trials that should be made in the metropolis; and he remained there till the 14th of July. It seems scarcely possible that he should have found any difficulty in making his first experiments in town; and yet he actually was three months in London before he could find a single individual to vaccinate. Knowing how easily an experiment of this kind might have been made without the knowledge either of the individual or his friends, we cannot understand how such a circumstance could have occurred. Be this as it may, how-

ever, the first experiment was made by Mr. Cline upon a patient who had disease in the hipjoint; and 'it was thought that the counter irritation might prove beneficial to the disease.' The following is Mr. Cline's letter to Dr. Jenner, containing the particulars of this case:—

'The cow-pox experiment has succeeded admirably. The child sickened on the seventh day; and the fever, which was moderate, subsided on the eleventh day. The inflammation extended to about four inches in diameter, and then gradually subsided without having been attended with pain, or other inconvenience. The ulcer was not large enough to contain a pea, therefore I have not converted it into an issue, as I intended. I have since inoculated him with small-pox matter in three places, which were slightly inflamed on the third day, and then subsided.

'Dr. Lister, who was formerly physician to the Small-Pox Hospital, attended the child with me, and he is convinced that it is not possible to give him the small-pox.'

Had Dr. Jenner been actuated by the *auri sacra fames*, he might at this time have made a much larger fortune in two or three years, than what was afterwards bestowed upon him by the parliament of his country. Mr. Cline particularly urged him to settle in town, promising him 10,000*l.* per annum as the result of his practice; but neither the love of money nor of fame were strong passions in Jenner; and content with his narrow means and humble lot, and rather, as it would appear, dreading than courting reputation, he declined all the advantages that might have accrued to him from acting upon Mr. Cline's advice. Upon many accounts, we think this determination is to be regretted. It was a natural consequence of the relation in which the metropolis stands with respect to the rest of the country, that the cow-pox lymph would be principally distributed from the London stock; it was, therefore, of infinite consequence that this should be preserved in a genuine state, and that the rules laid down should be the result of the most cautious and extended induction. Had Jenner himself directed the first experiments in London, it is little probable that the confusion which was thrown over the introduction of vaccination would have occurred; nor, perhaps, should we smart even now with so many alleged failures of its prophylactic powers.

It was to be expected that the annunciation of so important a fact as was contained in Dr. Jenner's Enquiry would excite curiosity and investigation in many quarters. It might also have been expected that men of high reputation would have been candid as well as cautious inquirers. The fact, however, was far otherwise; and what from the opposition of decided enemies, and the zeal of pretended friends, who were

more intent upon benefitting themselves than examining the evidence adduced in the Enquiry, vaccination made, for some time, but little progress. The first person who appeared as a decided opposer of the new practice, was the celebrated Dr. Ingenhouzz, 'Physician to the Emperor and King.' His letter to Dr. Jenner is pompous and dogmatical in the extreme; and the facts he opposes to the personal observations of the latter, are merely the hearsay evidence of a farmer and a farrier. Vainly did the discoverer of cow-pox endeavour to conciliate or explain to this very important personage: his opinion had been hastily formed, but it was most obstinately adhered to.

The most serious attack, however, upon vaccination, at its first introduction, came from Dr. Woodville, at that time Physician to the Small-Pox Hospital. All his experiments were instituted with genuine vaccine virus, taken from the cow, but they were *'instituted at the Small-Pox Hospital in London; and many of the patients, besides being exposed to a variolous atmosphere, actually had small-pox matter inserted into the arm on the third and fifth days after vaccination.'* Well may Dr. Baron exclaim against this as a fair trial of cow-pox. The chances were almost incalculable in favour of variolous infection taking place, before vaccination could be performed; and, as is well known now, the variolous pustule, and the vaccine vesicle, will go on in the same individual together. In consequence of instituting the experiments in this place and manner, eruptions appeared in the majority of those vaccinated, which were not distinguishable from the variolous eruption. It is extraordinary that neither Dr. Woodville, nor Dr. Pearson, should have suspected any error, when the results of their experiments were so different from those of Jenner, from whom they in the first instance had acquired their knowledge of cow-pox. From whatever circumstance, however, this oversight was derived, Dr. Woodville not only deceived himself, but contributed very extensively to deceive other people. The impure matter from individuals affected with eruptions, was distributed as genuine vaccine virus, and with the consequence that might have been expected, of transmitting either small-pox, or a modified disease only, instead of the mild and single cow-pox vesicle. Nor was this all, for Dr. Woodville, with a precipitation scarcely excusable on any grounds in one of his high reputation, published the reports of his experiments, without suspecting, as it would seem, any blunder in their institution; and, building upon these mistaken premises, he 'contended that the cow-pox was occa-

sionally an eruptive disease of great severity; that three or four cases in five hundred had been in considerable danger, and that one child had actually died under the effects of the disease." He admitted, indeed, that the eruption was generally rarer, and that the fever was milder, than that of small-pox; but, as if blowing hot and cold with the same breath, he proceeds, 'Now if it be admitted that one of five hundred will die of the inoculated cow-pox, I confess I should not be disposed to introduce this disease into the Inoculation Hospital, because, out of the last 5000 cases of variolous inoculation, the number of deaths has not exceeded one in six hundred.'

Some of the matter from Dr. Woodville's stock was sent to Jenner, and he employed it in several cases without the production of any variolous eruption. In only one or two cases, also, of 107 inoculated by Dr. Marshall with virus from the same stock, did 'any other eruptions appear than those around the spot where the matter was inserted.' In order, however, to investigate the matter more thoroughly, Jenner obtained some genuine vaccine virus from Kentish Town, immediately from the cow. With this, Dr. Marshall continued his experiments; and in a letter, written after Dr. Woodville's publication, he says:

'In Dr. Woodville's publication I notice an extraordinary fact. He says, that the generality of his patients had pustules. It certainly appears extremely extraordinary, that in all my cases there never was but one pustule, which appeared on a patient's elbow on the inoculated arm, and matured. It appeared exactly like that on the incised part.'

But the matter sent out from the Small-Pox Hospital was not always thus mild in its effects; and there is much reason to believe that not only was the matter taken from patients who had a modified disease, but that the threads were sometimes charged with true variolous matter. At Petworth, a Mr. André inoculated fourteen persons with this virus, 'and all had variolous-like eruptions, some being loaded with heavy burdens.' Lord Egremont, who had taken considerable interest in vaccination, was much disappointed by this apparent failure; but, unlike Dr. Jenner's pretended professional coadjutors, he wrote to the author of the new practice, giving an account of what had happened, and requesting an explanation. The answer was such as might have been anticipated from Dr. Jenner's knowledge of the facts. He regarded the matter sent from London as contaminated, and furnished his Lordship with genuine virus from his own stock. The result of these new trials is given in the follow-

ing extract from a letter to Mr. Gardner ; and exhibits at the same time a pleasing view of the caution and candour with which this inquiry was conducted by Jenner himself.

‘ From Lord Egremont I have also had a pleasant account. The matter I sent his Lordship has dissipated all doubts and prejudices, he says, from the minds of all the people round him. Forty have been inoculated with the virus, and all had the disease as I describe it. You must observe, that fourteen had been previously inoculated with matter from Pearson, and *all* had variolous-like eruptions. Some were loaded with heavy burdens. But yet we must again review our observations on the pustular subject; for if I should produce them in any one patient, Pearson would triumph ; and I must confess, I don’t see why cow-pock, though not small-pox pustules, should not appear. I have seen one on a woman’s forehead like the pustule on the arm, but smaller, and one on a girl’s wrist.’

Gradually, however, opposition subsided. Dr. Woodville himself met with fewer pustules even in the Small-Pox Hospital ; and the accurate and extended observations of other practitioners fully confirmed all the assertions of Dr. Jenner. At length, by the activity of Mr. King, the following opinion was obtained from the most able men in London, among whom were Baillie, Halford, Cline, Cooper, Abernethy, Lettsom, Willan, &c. &c.

‘ Many unfounded reports having been circulated, which have a tendency to prejudice the public against the inoculation for cow-pox, we, the undersigned physicians and surgeons, think it our duty to declare our opinion, that those persons who have had the cow-pox are perfectly secure from the future infection of small-pox. We also declare, that the inoculated cow-pox is a much milder and safer disease than the inoculated small-pox.’

This occurred about the middle of the year 1799, and the predominance of cow-pox may from that time be regarded as established. Some prejudiced and some obstinate men still continued their fruitless and irrational opposition ; but the main point was secured, and vaccination has more and more obtained in the estimation of those by whom the directions of the propagator have been accurately attended to.

From England the practice quickly extended over the continent, to America, and to the East and West Indies ; and Jenner’s time was almost entirely occupied in answering his correspondents, supplying them with lymph, and laying down directions for distinguishing the spurious from the genuine vaccine vesicle. Societies also began to be formed in different parts of the country, and every exertion made to establish vaccination, and eradicate small-pox.

Among the societies proposed at this period was one in London, of which the attempted founder was Dr. George

Pearson ; and in consequence of which, a misunderstanding arose between him and Jenner, which was never afterwards (we believe) reconciled. It is always painful to bring individuals in an unpleasant light before the public; whatever their station or rank may be ; but it is doubly painful, when for any length of time they have enjoyed a fair reputation. Justice to Dr. Jenner, however, demands that the conduct of Dr. Pearson should not be concealed ; and in now laying it before our readers, it shall be our endeavour to avoid every exasperating and harsh expression. In thus acting, we shall but imitate Jenner's biographer, who in this respect has been particularly commendable.

Early in 1799, Dr. Pearson appeared inclined to appropriate more merit to himself than was fairly his due ; and, without mentioning Jenner's name, offered to supply practitioners at a distance with vaccine virus. This, though suspicious, might certainly be accounted for upon mere oversight ; but his subsequent conduct will by no means admit of so charitable an interpretation. He proposed to form a vaccine board, in which he appropriated the principal office to himself, and appointed whom he pleased to the inferior situations. Of this intended institution, the late Duke of York had permitted himself to be named a patron ; and it was highly and extensively encouraged by other benevolent individuals. In December of the same year he wrote to Jenner, announcing the intended institution, and offering, *if he was able*, and if it should not be disagreeable to Jenner himself, to propose him as an *extra corresponding physician* ; to which also he adds, ' No expense is to be attached to your situation, except a guinea a year as a subscriber.' A more preposterous proposition than this can scarcely be imagined. The discoverer of cow-pox to be made an *extra corresponding physician* of an institution, of which the sole object was to extend vaccination, and to be called upon to subscribe for the propagation of a practice which not only originated with himself, but from which, though mankind at large was benefited, he had at that period received no pecuniary advantage.

In consequence of this communication, Dr. Jenner left Berkeley for London in January 1800, having declined in the first instance any participation in the new institution. After his arrival in London, he was admitted to an audience with the Duke of York, on which occasion the proceeding of the intended society underwent a lengthened discussion. An attempt was made at the same time by Dr. Pearson and his friends to reconcile Dr. Jenner to their proceedings, and to persuade him to connect himself with their institution. Regarding, however, the many blunders that had been made by

that gentleman and his coadjutors, and the very little candour that they had exhibited in their investigation, we cannot think Jenner wrong in refusing any union with them. The probability is, that had he not done so, the confusion which they had begun would scarcely have been cleared away to this day. The result of Dr. Jenner's determination was the retirement of the Duke of York, Lord Egremont, and many other patrons, from the institutions; and the grounds upon which they acted were well explained in the remark of Mr. Angerstein, which is also a complete justification of Jenner and his friends. He said, 'that he would not mind a subscription of one hundred or two hundred pounds in an institution organised by the man who was best competent to set about it; but that he would have nothing to do with one grafted upon the present blunders.'

Dr. Pearson's opposition to Jenner, however, did not end here; but he endeavoured to prove before the Parliamentary Committee, that the merit of the vaccine discovery did not belong to Jenner. So well convinced as the world now is, that Jenner is entitled to whatever reputation the discovery may claim, it would be a loss of time to discuss Dr. Pearson's evidence. We shall only say, that it is equally degrading to the moral and intellectual qualities of the individual who gave it.

Honours now crowded upon Jenner. He was elected a member of almost all the most celebrated societies of Europe and America. The medical officers of the Navy, with Dr. Trotter at their head, presented him with a gold medal in testimony of their sense of his discovery. A handsome piece of plate was presented to him by the nobility and gentry of his own county; and in 1803 the degree of Doctor of Laws was conferred upon him by the University of Cambridge, Massachussets. It is, however, lamentable to observe, that in the long list of honours which were bestowed upon Jenner, none emanated from any British University,—at least no mention is made of any such notice in the present volume, which brings Jenner's life down to 1803.

In 1802, an application was made to Parliament for some pecuniary recompense, which, considering the time spent in completing the inquiry, and the immense benefits derived from its results to the public, can scarcely be termed successful. Only ten thousand pounds were granted to this first application, although fifty thousand pounds had been voted to Grattan but a year or two before for nothing. As the evidence given upon this occasion proves incontestably the claim of Jenner to the discovery, we shall present a brief analysis of it.

The inquiries of the Committee were directed to 'the utility of the discovery itself;—the right of the petitioner to claim the discovery;—and the advantage in point of medical practice and pecuniary emolument, which he has derived from it.'

The utility of vaccination was proved by every medical man that was examined, even by those who wished to appropriate to themselves what properly belonged to Jenner.

Sir Everard Home proved, that Dr. Jenner carried with him in 1788 a drawing of the cow-pock, as the disease appeared upon the finger of a milker in London. Dr. Woodville, whose conduct and evidence on this occasion form a most favourable contrast to the behaviour of Dr. Pearson, after acknowledging that in his early experiments he had been mistaken upon some points, attributes the whole merit of the discovery and practice to Dr. Jenner; and referring to the traditions in the dairy counties, he says, 'that although since his publication, it has appeared that it had been obscurely practised, the world would never have been acquainted with it but for Dr. Jenner.' Even Dr. Pearson, whose evidence is throughout calculated to lower the estimation of Jenner, says, that 'inoculating with the vaccine matter from one human being to another is exclusively Dr. Jenner's.' And he states, that his own knowledge of cow-pox was 'in the first instance derived from Dr. Jenner.'

Mr. Keate, the worthy coadjutor of Dr. Pearson, allows that he never heard of inoculation for the cow-pock before Dr. Jenner's publication; and the attempt made by these gentlemen to detract from the merit and originality of the discovery was confined to the production of evidence to prove, that 'in some rare instances the knowledge of the prophylactic powers of cow-pox was carried one step farther, and that the cow-pox was communicated either by handling the teat, or by inoculation from the animal.' The following extract, from the evidence of Mr. Robert Keate, in reference to some manuscript papers of a Mr. Nash, which contained a few facts and opinions respecting the virtues of cow-pox, will exhibit the praiseworthy manner in which every hearsay tale was raked up in opposition to Jenner.

'I heard from Mr. Battiscombe yesterday, that he believed he heard Mr. Nash and his sister mention the name of Jenner, but was not at all certain that it was Dr. Jenner who applies to Parliament.'

All the other witnesses, forty-two or forty-three in number, attribute the whole discovery to Dr. Jenner.

A second application was afterwards made to Parliament;

but the present volume does not bring the life of Jenner lower than 1803.

In the spring of this year the Royal Jennerian Institution was formed, and Dr. Jenner was appointed president. In no long time after its establishment, however, Dr. Walker, the inoculator, began to inculcate opinions, and to give directions, very different from those which Jenner himself had laid down. In consequence of this circumstance, a charge was made against him to the Medical Committee in 1806, who, having considered the accusation proved against him, and that he ~~was~~ unfit for the office of inoculator, submitted their resolution to a general meeting. After much difficulty, the proceedings terminated in the resignation of Dr. Walker. After this schism, the institution was considered by Jenner himself as nearly extinguished; and in 1808, 'on the establishment of the National Vaccine Institution, its finances being exhausted, its operations would appear to have ceased entirely.' The society, which is now called the Royal Jennerian Society, has never been in any way directed by Jenner; nor in fairness ought his name to be used.

The estimation in which at this time Jenner was held by foreign nations was equally honourable to him and to them. The French, forgetful of all national animosities at that time more than usually excited by the peculiarity of the war, paid him very marked respect; and he was often applied to for his interest when noble and experienced diplomatists had failed in their endeavours. As one instance of this, we may mention an application made by him to the Institute to employ their influence for the liberation of Lord Yarmouth, one of those unjustly detained at the breaking out of hostilities.

In having thus brought down uninterruptedly the narrative of Jenner's life to the period at which the present volume terminates, we have omitted the consideration of his opinions respecting the nature of cow-pox, and the evidence by which those opinions were supported. Dr. Baron, however, has, in stating them, exhibited probably much more erudition than Jenner himself possessed; but the manner in which the historical details thus collected bear upon doctrines that were the result, in the discoverer of vaccination, of personal observation only, affords certainly very strong corroboration of their correctness.

Jenner always regarded both small-pox and cow-pox as varieties of the same disease, and he was inclined to believe that both originated from animals. Of the origin of the latter, no doubt of course can exist; but with respect to the former, no proof has yet been adduced; nor, perhaps, ought we to say that the additional facts now related by Dr. Baron are unequivocally demonstrative of the correctness of the

opinions. The following propositions exhibit the nature and object of the proofs here brought forward :—

‘ First, that an eruptive disease *common* both to man and to the inferior animals has been known in different ages, and in different countries; and that the descriptions given of this eruptive disease by various writers accord so completely with those acknowledged to be characteristic of small-pox, as to render it highly probable that this disease actually existed at a much earlier period than that usually assigned to its origin.

‘ Secondly; that as there are numberless writers who have described the small-pox in man, so there are others of established name and reputation, who have treated of a similar eruptive and pestilential disease as existing in various countries, and in different times, among the inferior animals, but especially among cattle; that to this disease they have unhesitatingly applied the name of *VARIOLA*; and actually recommended such treatment as experience had proved to be useful when that disease attacks man.’

In tracing the first proposition, the inquiry is carried back, not very profitably perhaps, to the plagues of Egypt. We have certainly never yet felt an inclination to undervalue any evidence which the Sacred Volume affords; but it is to be feared that referring to it to prove that which it does not prove, may lead weak and vain minds to reject it in more important points. In the present case, nothing appears to be gained to the cause; and unwilling as we are to contest any question of cutaneous disease with Dr. Willan, we can scarcely see all the symptoms of small-pox in the passage extracted from Philo. Thus much may, however, be allowed, that ‘ the plague of boils and blains’ was a plague upon man and upon beast. To the same point, and no farther, is the quotation from Homer referable,

‘ On mules and dogs th’ infection first began,
And last the vengeful arrows fixed in man.’

Not to enter into the details, which may be found in the Life itself, it may be shortly stated, that many diseases, ‘ *pecudes hominesque corripientes*,’ are mentioned by Livy, Orosius, Dionysius of Halicarnassus, and many other writers.

Of the plague of Athens, so admirably described by Thucydides, and copied from him by Lucretius, much difference of opinion has existed. By some it has been denied to be the small-pox; and their objections have rested upon the meaning of the Greek words describing the eruptions. We have, perhaps, no mode of ascertaining their exact import, but connecting the ‘ *φλυκταίναι μικραι*’ with the other symptoms, we are much disposed to believe that the disease was really small-pox. Whatever this malady may have been, no other description, so nearly resembling small-pox, has been

left by any historian before the middle of the sixth century. Nevertheless, some of the symptoms enumerated as characterising different epidemics are such as attend upon small-pox, and may justify a suspicion that this was really the disease. Of this kind were, -

' Loss of sight, in numerous cases, and still more frequently a severe inflammatory affection of the eyes of those attacked, is particularly noticed. This, together with the pustular eruption, and the absence of buboes and parotids, would seem to distinguish the disease from the *pestis inguimaria*, or true plague, and with other symptoms to identify it with small-pox.'

Additional ground for the belief that small-pox has existed long before any authentic record of the disease, is afforded by the fact, that long after it had been recognised, the term *pestis*, or plague, was very generally applied, without discrimination, to every fatal epidemic. If, therefore, this happened after the nature and peculiar symptoms of the malady were recognised, it may well be believed that a similar inaccuracy may have existed before.

It seems, then, clearly proved from these few facts, that epidemics have prevailed from the very earliest times, which have attacked both man and beast. Now, can it be proved that any such disease still exists, and that this disease is small-pox? It is certainly fair to conclude, that small-pox has all along been observed, though its phenomena have not been recorded by earlier writers, or though their records have been lost.

It must be acknowledged by those who are most anxious to trace the variolous disease to a very early period, that the evidence is extremely unsatisfactory: but very few medical opinions are so well supported as, that a disease, described as small-pox, has at various times been observed among cattle. The first instance of this kind extracted by Dr. Baron is an epidemic, described by Lancisi, and which prevailed in the papal territory in 1713. Reference is made by Lancisi, at the same time, to a disease mentioned by Fracastorius, and which raged in the commencement of the sixteenth century. Lancisi concludes a discussion upon the name of this epidemic in these remarkable words: 'Horror pilorum, et armorum, cluniumque tremor, maculis denique et pustulis infecta cutis. Adeo ut quibusdam in mentem venerit cogitare boves non lue, ut nunc res est, sed *ipsis pustulis*, quas *variolas* vocant, interire.'

Ramazzini has given also the following description of a disease which attacked the cattle in 1690:—'*Tubercula autem illa quæ in capite, collo, et cruribus pecudum visebantur, reverâ variolas fuisse licet profectò asserere, quandò nec*

figurâ, colore, nec liqore in illis contento, nec magnitudine, nec modo quo solvebantur post suppurationem, nigrâ crustâ superstite, quicquam à puerorum variolis discrepabant.*

The description of the lues bovilla, as it appeared in Italy in 1711, so accurately corresponds with small-pox in the human subject, that very little doubt can exist of the identity of the two diseases.

‘ “ The kind of affection which seemed to have declared exterminating war on the whole race of oxen, was evidently a malignant, destructive, and (if you will) a pestilential fever, commencing with chills, rigor, horripilatio, succeeded quickly by pungent, violent heat diffused over the whole body, with frequency of pulse, and accompanied by great anxiety and heavy panting, together with stertor, and, in the commencement of the fever, with stupor, and a kind of lethargy; a continual flow of stinking matter from the mouth and nostrils; a most foetid discharge from the bowels, and this at times bloody; loss of appetite, and rumination was altogether destroyed; on the fifth or sixth day pustules broke out over the whole body of the animal, and tubercles resembling *variola* in kind and appearance; death common to all, and in the same manner, about the fifth or seventh day; very few escaped, and these rather by chance than the efficacy of any remedies.” ’

A similar epidemic has been described by Dr. Layard in the Philosophical Transactions, as having been observed in England, and which was acknowledged by many of those who witnessed it to be a kind of small-pox. It was in several instances communicated by inoculation. ‘ The disease,’ he says, ‘ among horned cattle is an eruptive fever of the variolous kind: it bears all the characteristic symptoms, crisis, and event, of the *small-pox*; and whether received by contagion, or by inoculation, has the same appearances, stages, and determination, except more favourable by inoculation, and with this distinctive and decisive property, that a beast having once had the sickness, naturally or artificially, never has it a second time.—According to the several prejudices of different countries, various opinions have arisen of the nature of this sickness. Such as are averse to inoculation have obstinately refused to acknowledge it was similar to the small-pox in the human body, and have very idly asserted, that the only intention of declaring this contagion to be a species of small-pox, was purposely, and with no other view, than to promote inoculation for the small-pox. Others have

* ‘ But the tubercles which appeared on the head, neck, and legs of cattle, may be properly called *variola* (small-pox), for neither in shape, colour, nor the fluid they contained, nor in their manner of disappearing after suppuration, a black eschar being left, did they in the slightest degree differ from the small-pox of children.’

as positively declared it to be a pestilential putrid fever, owing to a corrupted atmosphere, and arising from infected pastures. But unfortunately for the supporters of this opinion, while the contagious distemper raged with the utmost violence on the coasts of Friesland, North and South Holland, Zealand, and Flanders, there was not the least appearance of it on the English coast, from the North Foreland to the Humber, although the coast and climate are the same.' And the celebrated Vicq d'Azyr, in a letter to Dr. Layard, dated August 28th, 1780, employs the following words:—'*Il me paroît, comme à vous, que c'est toujours la même maladie qui a régnée depuis 1711, et qu'elle a de grands rapports avec l'éruption varioleuse.*' And in his *Précis Historique* of the pestis bovilla, as it appeared in Picardy, he says of the diseased cattle, '*Quelques uns ont eu le cou couvert de boutons; et cette terminaison étoit ordinairement heureuse.*'

These facts abundantly prove, that a disease similar to small-pox has at various times prevailed among cattle, and one step only was wanting to identify it with variola, viz. its communication, by inoculation, to man. It is true that vaccination has established, beyond all manner of doubt, that one disease at least may be transferred from the lower animals to the human subject; and that the lues bovilla was of this kind, is only not absolutely demonstrated.

The argument, therefore, in favour of the antiquity of small-pox, and of its originating from animals, taking those circumstances only which we have considered, stands thus. From time immemorial an eruptive disease has been known, which has equally attacked both man and animals. From the imperfection of the descriptions, and probably from many records being lost, the precise nature of this disease in earlier times cannot certainly be ascertained. But a similar disease has been observed for the last century, and, according to the accounts given by most accurate observers, it resembles both in its symptoms and appearance, variola, as it appears in the human subject. So far, therefore, we may conclude that the disease formerly noticed was the same with that which has been observed in modern times, particularly as no other eruptive disease is known, common to man and the lower animals. From the circumstances of vaccination, and the certainty that it does originate with the cow, some ground is afforded from analogy that small-pox also is derived to man from the brute creation. But that cow-pox and small-pox are merely varieties of the same disease, seems to be indicated by this circumstance: there are other diseases which attack individuals only once in the course of life, such are measles, scarlet fever, &c.; and an attack, however slight, of either of

these complaints, generally secures the system from a repetition of the disorder; but an attack of scarlet fever will not prevent the invasion of measles, nor, *vice versâ*, the invasion of measles an attack of scarlet fever. It may therefore be permitted us to conclude, that like diseases are alone effective in preventing an attack of disease. But cow-pox prevents an attack of small-pox, therefore cow-pox is a like disease to small-pox. The opinion then, of Jenner, that these two maladies are only varieties, seems borne out by what we know of other disorders. But when it is remembered that even small-pox itself may by great care be rendered a much milder disease, it seems scarcely possible to doubt that the lues bovilla was a true variola, which, from favourable circumstances, has now been modified into the common variola vaccina. The following observations of Dr. Baron appear particularly excellent with regard to this point:—

‘ Still further to elucidate the preceding observations, let us advert to some of the facts connected with the natural history of the Variolæ Vaccinæ. Though they have not appeared recently in a fatal or malignant form among the cattle, it is certain that they sometimes proved a severe and troublesome disease to those who caught it from the cattle, insomuch that an experienced surgeon anticipated little benefit from propagating it by inoculation, because, as *he* had seen it among the dairy people, it was almost as severe as the inoculated small-pox. As, therefore, the Variolæ Vaccinæ sometimes assume the character of small-pox under one of its modifications, so the latter under certain circumstances approximates in its nature the mildness of the former. After a series of inoculations with true variolous matter, it has often been observed that the severity of the symptoms and the number of the pustules gradually diminish till only *one* is to be seen, at the point of insertion; and that this pustule, though it may have excited no constitutional indisposition, provided it has regularly gone through its course, protects the individual from subsequent attacks of small-pox.

‘ This fact did not escape the observation of Dr. Jenner; in reference to which he has remarked in one of his memoranda, “ Here then we see the cow-pox and the small-pox acting similar parts; and that in either case the virus may steal, as it were, imperceptibly through the constitution, and give no signal of its presence.”

‘ As connected with this subject it is not irrelevant here to remark, that Dr. Adams, physician of the Small-pox Hospital in London, succeeded in producing a benign form of variola, attended with scarcely any eruption of pustules, and little or no constitutional affection; and this species of small-pox he considered capable of being rendered fixed and permanent. He selected such patients as came under his care with a mild kind of small-pox, which occasionally showed itself in London. Dr. Adams denominated this the Pearly-pox, from the pearl-like appearance of the attendant erup-

tion; the pustules were few, distinct, and filled with limpid matter, not unlike that in the cow-pox vesicle, to which indeed, according to him, this variolous pustule bore no distant resemblance. The constitutional symptoms, he also says, were very trifling, and he expressly declares it as his decided belief that he had succeeded in giving this innoxious form of small-pox permanence and uniformity.

Respecting the actual origin of the *variola vaccina*, some doubt may perhaps still exist. That it may be, and generally has been, derived from the grease in horses, there is no ground for questioning. Dr. Jenner frequently employed the equine matter in the latter part of his life, and found it equally efficacious as a preventive of small-pox. It has been suggested by Dr. Baron, that the grease may only be the general 'mode in which the disease exhibits itself in the horse;' but as this disorder is extremely common, and readily excitable by improper diet, and negligent grooming, its origin from the horse has more probability than any that is now known. The epidemics may equally have had this source, though in common times they have been either entirely wanting, or have been very mild. It is quite certain, that particular seasons have very remarkably different effects upon the same diseases; and hence some explanation may be afforded of the lues bovilla existing at one time, and the simple *variola vaccina* at another. Nay, though both are essentially the same diseases, it may be doubted, if matter taken from an animal affected with the former would have equally innocent results; and had the disease been communicated to man by Dr. Layard, it might have prevented the introduction of vaccination altogether. It was perhaps fortunate for Jenner, that the virulence of the disease in cows had abated before his experiments were made.

It would give us pleasure to trace the influence of vaccination upon the late epidemics of small-pox; but we cannot now afford time for the task. On all hands, however, this has been acknowledged to be highly satisfactory; and it is the more so, from the great negligence that has existed in performing vaccination. In many populous districts, we know that a genuine vaccine vesicle was a rare occurrence, and matter was taken indiscriminately by many practitioners, however irregular the cow-pock may have been. To this extreme carelessness many of the late failures are unquestionably to be attributed; and should small-pox ever become again extensively fatal in England, the whole cause will lie with the medical men. Let them then remember, that with so much in their power the misfortunes of others will be their guilt, and that ignorance and carelessness are not, in their circumstances, merely faults, but grievous crimes.

II.

OF THE NATURAL SYSTEM OF THE NERVES.

Appendix to the Papers on the Nerves; republished from the Royal Society's Transactions. By CHARLES BELL. *Containing Consultations and Cases illustrative of the Facts announced in those Papers.* 8vo. Pp. 144. London, Longman and Co.

IT must be well known to all who learned their anatomy previous to the labours of Mr. Charles Bell, that the nervous system, the most delicate, and in some respects the most interesting part of the human body, was demonstrated to them with very imperfect references to its various uses. There was in the old method much of error, much of confusion, much of fancy. Various phenomena, both of health and disease, were accounted for in a manner which was never satisfactory, and which is now clearly shewn to have been incorrect. Motion and sensation, and general and specific sensation, were either vaguely and mysteriously ascribed to the same nerves, or were but conjectured to result from a peculiar arrangement of fibres distinct in their office. Mr. Bell has not only in this instance verified, by a train of admirably conducted experiments and observations, what was mere conjecture, namely, that the separate fibres of which the nerves were composed might perform separate offices, but has also established the distinct existence of a third set of filaments, of which the office is to combine the muscles concerned in respiration. Instead of giving a bare description of the origin and course of certain nerves, he has resolved them into their filaments, and explained the offices and connexions of each—a task of exceeding intricacy and delicacy.

Mr. Bell observed, that the addition of vertebræ in animals comprehended a relation with a peculiar constitution of the thorax, and a form and distribution of the nervous system required for associating the muscles engaged in that important function. Viewing the two lateral portions of the spinal marrow as consisting of three tracks or columns, one for voluntary motion, one for sensation, and one for respiration (each of these columns having subdivisions, not yet explained), he instituted experiments, of which the result was a discovery of the distinct functions provided for by the several roots of the spinal nerves. He shewed that the anterior column of each lateral portion was for motion, the posterior for sensation, and the *middle* column for respiration, (this was at least rendered evident along a certain extent, and probable along the whole); that whilst the anterior and posterior columns extended up into the brain, the middle stopped

at the medulla oblongata. He inquired into the effects of the double origin (from the anterior and posterior columns,) of the spinal nerves; and explored the nerves which correspond in office with them as regards the head and face. By a few experiments on animals, he was enabled to shew, beyond a doubt, the distinct office of the anterior and posterior roots of the nerves of the spine; that the anterior communicated motion, and the posterior or ganglionic roots, like *all* nerves having *ganglia* throughout the body (in direct opposition to the old opinion), were for sensation. He demonstrated the existence of the fifth nerve as truly the upper spinal, connected with the other spinal nerves by its double office, and resembling them in its mode of origin: and he established it in an especial manner as the nerve communicating common sensibility to the head and face; expression and (with a slight exception) motion being wholly provided for in this part of the body by another nerve, the portio dura of the seventh pair, to which he gave the name of the respiratory nerve of the face. The observations of Mr. Bell did also most assuredly tend, generally, to correct and settle our notions of the functions of what are called the cerebral nerves; shewing, that whilst the first nerve is truly olfactory, and the second capable of conveying sensations of light; the third is a voluntary nerve, expended on the muscles of the eye; that the fourth provides for motions of the eye-ball which are performed insensibly in several states of respiration, and when we close the eyelids; that the fifth is the nerve of general sensation for the whole head and face, including the internal and external surfaces; the sixth a muscular and voluntary nerve of the eye; that the part of the seventh called the portio dura is the nerve of facial motion and expression, and its respiratory nerve; that the eighth and accessory are also respiratory nerves; the ninth the motor nerve of the tongue; the tenth, like the other spinal nerves, double in origin and in office, being both muscular and sensitive, supplying some parts of the head to which the branches of the fifth do not extend.

The work to which the present publication is an Appendix* contained several cases in which the phenomena of disease amply confirmed the result of experiments; and the Appendix is composed of additional testimony, and illustrated by a plate in which the medulla spinalis and the respiratory nerves of the face, neck, and trunk, are very clearly represented. It may be supposed, that the work furnishes but small matter

* An Exposition of the Natural System of the Nerves of the Human Body. London, 1824.

for review ; but we should be negligent of our proper duty if we did not avail ourselves of its appearance to remind our readers of the *practical* value of researches which they may probably have regarded as not only abstruse and difficult, but as having too remote a connexion with practice to call for their particular attention. For although the value of Mr. Bell's Exposition is incontestable, we apprehend it has by no means received the general notice which it deserves : it is justly appreciated by all within the sphere of the different medical schools, and by many intelligent practitioners remote from it ; but the generality of practitioners are yet by no means sensible of the importance of its subject in the common occurrences of their practice. Yet, without an acquaintance with the facts and observations contained in these books, the practitioner will daily fall into the old error of confounding a partial paralysis of the face, dependent on local injury or irritation, with such a paralytic affection as arises from disease of the brain ; and will consequently employ means ill adapted to the cases he has to treat. Nor, unless he has studied the origin, distribution, and office of the nerves, as shewn by Mr. Bell, will the surgeon be guarded from the grievous mistake of dividing the branches of the seventh nerve, or portio dura, to relieve a patient labouring under *tic douloureux* ; an operation which whilst it could not relieve the pain, the nerve not being a nerve of sensation, but only a nerve of motion, would produce paralysis more or less complete of the muscles of the face, with loss of expression ; thus causing some deformity, and greater inconvenience, or even bringing on consequences more serious, as the exposure of the eye, by dividing that portion of the seventh nerve which goes to the eyelids, and subsequent opacity of the cornea, and loss of sight. After a proper attention to this part of anatomy, he learns, that by dividing the fifth nerve he neither produces deformity nor loss of power in any of the muscles ; and is yet enabled to relieve the pain. Considerations of this kind are of course applicable to all operations on the face. It is also obvious, that the external indications, both of the nature and degree of disease or injury arising from causes affecting the origins of the nerves, or different sets of nerves, (and in some cases of a more general kind, as in *hysteria*, &c.), become more intelligible in proportion to the exactness of our knowledge of the origin and distribution of the nerves, and of their precise and distinct offices.

Our task is necessarily limited to making a few extracts from Mr. Bell's Appendix, under separate heads ; and we shall do so with very little comment.

*' Paralytic Affection of the Face.**—In consultation the following letter was put into my hands :—

“ It is in my power to relieve your mind of much anxiety. My experience has furnished me with five cases of paralysis of the muscles of the face of one side, and completely local, and in no way connected with the *encephalon*. They all did well without general bleeding. Dr. B. and Dr. S. met me lately in consultation on the case of a lady in the eighth month of her pregnancy, who suffered this partial paralysis of the muscles on one side of her face, from the action of mercury on her mouth. The sore mouth inflaming, a lymphatic gland between the mastoid process and the angle of the jaw, compressed a branch of the seventh pair of nerves. The muscles of the face on that side were so completely paralysed, that the cheek was drawn by their antagonists, and the mouth disfigured.

“ Dr. B. and Dr. S. suspected pressure on the brain at the origin of the fifth pair of nerves. But I took the liberty of stating the discoveries of Mr. Charles Bell, and proved to them by other cases which had fallen under my notice, that there was no danger, and that the brain was not implicated.

“ This case, in the course of a fortnight, did well under the use of mild laxatives, leeches behind the ears, and a small blister.”

The following case is contained in a letter to Mr. Bell :—

' Paralysis of the Face.—“ My dear Sir, Being informed by Mr. Alexander Shaw, that you were desirous of having some notes which I had taken of partial paralysis of the face, I beg leave to transmit them to you.

“ S. Nicholas, æt. thirty-five, a sailor. He has been ill for upwards of three years with various scrofulous affections. Two years ago he first noticed that he was deaf in his left ear. Subsequently there has been a discharge from it. About nine months ago, abscesses formed in various parts of his body, one of which broke just betwixt the mastoid process and the angle of the jaw of the left side. The cicatrix is still painful to the touch. Shortly after the formation of the abscess, it was remarked that the left side of the face was paralysed, and the eyelids of the same side stood open, and could not be closed by any mental effort directed immediately to them.†

“ He says, that a portion of that side, viz. the fleshy part of the cheek, feels puffy; although, he adds, he is conscious that this is not really the case. The left ala nasi is also paralysed; for if he lies on the right side with his head pressed against the pillow, he is

* To know the previous state of opinions, and the point from whence we start, read a paper on this subject, Transactions of the College of Physicians, vol. i.

† It may be worth remarking, that Nicholas always keeps the lids of the left eye closed by his hand, to keep it warm, as he says.

obliged to pull the left nostril open with his fingers in order to breathe freely.

“ He also says, that he feels as if he had no power to hold any thing with the *sound* side of his mouth. It is certain that he always applies the mug, in drinking, to the paralysed side.

“ He can chew equally well on both sides : and the sensation of touch is equally acute in all parts of his face. The eyeball of the left or paralysed side is also sensible to touch, and to other stimuli. The motions of the eyeball were examined by Mr. North, of Seymour-street, by Dr. Stewart, Mr. Griffiths, and by myself, and it was evident to all of us, that whenever the patient attempts to close his eyes, the left eyeball is turned up. When the right eyeball was examined by forcibly separating the lids of that side, it was always found in the same position as the left.

“ I remain, dear Sir, your obliged

“ R. FERGUSON.

“ 5, Baker-street, Portman-square, Feb. 21, 1825.”

‘ We have in the foregoing letter a simple and very clear statement of a common case : for the case is very common, although the observers are not always masters of the subject like Dr. Ferguson.

‘ The *rationale* is obvious enough. The *portio dura* is involved in the stool of an abscess ; and it has partaken of the inflammation. Just as the spinal marrow being involved in the inflammation of the diseased vertebral column will cause paralysis of the lower extremities, so here the muscles of the face corresponding with the *portio dura* lose their power.

‘ The reader will observe, that the patient “ *can chew equally well on both sides.*” I have noticed such circumstances before, that although the individual could not hold his pipe with the lips, he could turn the morsel, which led me to reflect on the muscular branches of the fifth pair sent to the buccinator muscle. See the *last paper on the Nervous Circle,* and System of Anatomy*, vol. ii. p. 518.

We quote another also communicated in a letter to the author.

‘ *Case of Paralysis of the Voluntary Muscles of the Eyeball.*— “ The master of a small trading vessel applied for advice. The most prominent and obvious symptom of the case was *ptosis*, or paralysis of the upper eyelid. Suspecting that there might be a general affection of the third nerve, or motor nerve, I desired him to look to the ground : he attempted it, but was utterly unable to accomplish his intention. He was also told to look upwards, and then inwards ; in both which he failed.

“ He could close and wink with the eyelids when we touched

* ‘ See the Philosophical Transactions.’

the cilia, proving that the *portio dura*, and the branches of the fifth, possessed their sensibility and power.*

“ Now, forcibly separating the eyelids, and desiring him to close them, while I still held them open, I could distinctly see the eyeball turn upwards, which I supposed to indicate that the fourth nerve still influenced the trochlearis muscle.

“ He had the power of looking outwards, accomplished by the sixth, which was not included in the paralytic affection. He saw well, save that the fallen lid interfered with vision. He had been troubled with this affection nearly a fortnight, attended with slight headach, and some symptoms of derangement of the stomach and bowels.

“ “ SAMUEL JOHN STRATFORD.

“ “ November 24, 1825.”

‘ *Ptosis* is the term applied by surgical writers to the relaxed eyelid, when the person cannot raise the eyelid so as to disclose the pupil. We have here nothing to do with those cases where the inability depends on disease in the eyelid itself; but it must be acknowledged, that the subject of paralysis of the eyelid was obscure until these observations were made. We perceive that this ingenious gentleman, when he found that the patient could not raise his upper eyelid, reflected that this must be from paralysis of the levator palpebræ superioris; that the defect must in all probability be in the third nerve; that if so, the motions of the recti, with the exception of the abducens, must also be imperfect. He found this to be the case. He then reflected that the instinctive turning up of the eyeball depended on other muscles, and on other nerves. He knew that when I had cut the voluntary muscle, the *rectus superior*, although the creature could not turn his eye to objects above, yet, that the instinctive motion of the eyeball upwards by the *obliqui* remained. He tried, and found that the involuntary turning motion of the eye-ball was here entire.

‘ We perceive the importance of this observation, since the defect is proved to be in a cerebral nerve, and therefore to imply an affection of the brain, and to threaten apoplexy. It stands contrasted with that inability of closing the eye which results from the affection of another nerve and of a different system, the system of respiratory nerves, which are more subject to derangement than the cerebral nerves, and which offer a less alarming symptom.

‘ It is said by surgical writers, that where there is *ptosis*, the patient, seeing a little under the eyelid, soon gets into the habit of squinting. Squinting is never a *habit*, the fact being that the weakness of the *levator* arises from a defect of the nerve common to that muscle, and to all the voluntary muscles of the eye; and hence the involuntary muscles require a preponderance, or comparative increase of power, and drag the eyeball.

‘ Practice or experience points out a distinction betwixt the con-

* ‘ See p. 9 of the last paper, on the Nervous Circle, in the Philosophical Transactions.’

dition of the patient, when the eyelid has fallen from paralysis, and when it is spasmodically twitched by the action of the orbicularis. This last is the periodical ptosis; and do we not perceive that the one is the formidable affection of the cerebral nerve, and the other the sympathetic affection of the respiratory nerve?"

The next case to which we shall give insertion, is one which illustrates the distinct functions of the seventh and fifth nerves.

'Disease of the Face.—"Eliza Smith. The disease from which this woman suffers has been supposed to be that sometimes called *noli me tangere*, and in its more aggravated form, *lupus*. The nose was destroyed by a slow process of ulceration, which opened the cavities of the face, so that we could look into the œthmoid and sphenoid cells. At this stage an ointment was used, which had the happiest effect wherever it could be applied, and she appeared nearly well. But a small speck of ulceration remained upon the os planum, deep in the cavity: it could not be arrested. The disease in that way got into the orbit.

"The eyeball became now protruded from the socket, with tension of the eyeball, and tumefaction of the conjunctiva, attended with excruciating pain. At length, the eyelids became so much pushed out that the eyelids could not meet; the cornea was continually exposed, and became opaque." (And now the symptoms began to bear on our present subject.) "The sensibility of the surface of the eye, though in a state of ulceration, was lost. She could press her finger upon the eye. The forehead of the same side, the lip, and the cheek, and side of the nose, were deprived of sensibility; at this time she could move the eyelids, although she could not close them from the bulk of the eye, and she had the motion of the cheek and lips.

"When the eye and temple were perfectly insensible, and when, as she herself said, she could pick off the scales from the surface of the eye without feeling at all, she was tortured with most excruciating pain seated in these very parts; that is to say, referred to these parts."

"But on the 28th December there is a note of this patient's case, which describes the swelling to have extended to the temple, the eye to have fallen, and where there was insensibility before, she cannot now bear the touch of a soft sponge.

"She for some time previous to this complained of a drumming, and a weary pain in her right ear; and now she cannot knit her brows, or move the eyelid, and when she speaks or blows there is a stillness in all that side of the face."

"This case requires little comment. The swelling of the parts within the orbit, compressing the fifth nerve, caused insensibility of the part of the face to which these branches were distributed without affecting the motion.

"When the tension and swelling subsided, there was returning sensibility; but more than this, the inflammation affecting the nerves

in their passage through the orbit, gave the sensation of excruciating pain, perceived as if in the face. An inflammation of a nerve does not give perception of pain in the proper seat of the disease, but in the part to which the extremity of the nerve is distributed.

‘Whilst the sensibility of the face was recovering (by the diminution of pressure on the nerves in the orbit), the motion of the features was arrested. But previous to this the ear became affected, by which it is implied that the seventh nerve had become compressed, or engaged in the progress of the swelling.’

Many other cases are related, including some from other authors: some of great interest are given under the head of *Affections of the Tongue*; and the section is concluded by these observations:—

‘The want of the power of swallowing, and the want of power of speaking, when occasioned by remote irritation, are not more extraordinary than the sounds which are produced from the same cause.

‘I have been consulted by a young lady of fifteen years of age, who had a convulsive barking noise like a cough, excepting that the larynx was alone affected, and there was no conforming action in the pharynx, velum, and lips. She would sometimes cough naturally in the intervals of this noise, but this natural coughing did not interrupt the return of the unpleasant hard bark at the rate of ten times in a minute; it ceased when she was asleep, but the moment she was awake the family heard the noise, intolerable from repetition. It continued a month, and returned three successive winters.

‘I have seen an instance in a young woman, where the same cause produced a more permanent and alarming effect, a spasm in the glottis, so continued and so severe, that the attendants called upon me to perform laryngotomy.

‘All the subjects of these odd cases, which we do not understand, get well. This is consolatory to a patient certainly, but not very satisfactory to ourselves. Ought it not to be a question, what nervous affections are consequent on trivial irritation? Without entering on the question, whether deranged health be followed by the imperfect and deranged action of the uterine system, or whether the latter be the primary disorder—the ovaria are the source of irritation; and the consequences are exhibited through the most susceptible system of nerves, the respiratory system. Hence the disorder of stomach, the spasms, globus, the difficulty of deglutition, the aphonia: hence the affection of the countenance, the tears, the sobbing, and spasms of the eyes, and face, and throat, and chest, and stomach.’

There is an abruptness in the conclusions of this extract, for which it is not very easy to account; we mean in the positive assertion respecting the ovaria: it is, however, but liberal to suppose, that Mr. Bell did not make it without

very good reason ; and we are certainly not prepared to dispute it.

The following remarks refer to a class of affections which are frequently observed, and explain their cause.

' Spasmodic Twitching of the Respiratory Muscles of one Side.— The unpleasant spasmodic actions of the muscles of the face, noticed in the text, pp. 254—256, &c. are continued, in some instances, upon the side of the neck and chest, through the influence of the same class of nerves. The following is an excerpt from a communication on this head :—

“ At every interval of three minutes or thereabout, there is a *sniffing* and twitching of the nostril of one side, the eyelids of the same side are at that moment spasmodically closed, and the angle of the mouth forcibly drawn towards the angle of the jaw ; the chin is tilted upwards and sideways, and there is a wriggle and a retraction of the shoulder. While there is an audible sniffing caused by the contraction of one nostril, there appears to be a motion of the diaphragm, and of the muscles of the side of the chest ; and this I judge of in part from the motion produced, but principally from the drawing of the breath, which causes a sound at the moment that the spasm of the face takes place.”

‘ This is the description of a very frequent disorder. It interferes with no necessary action of the parts, for it ceases while the patient is actively engaged, as if the voluntary effort could stop the tendency to spasm in the respiratory system ; it is, however, increased by agitation and speaking.’

We might add to the interest of this article by other extracts, and are greatly disposed to do so by inserting the case at page 124 ; but as it is of some length, and the observations, which are not less instructive than the case, could not conveniently be included, we deem it better to refer our readers to both. Indeed, we have already borrowed so much from the author as to feel in some degree guilty of pilfering. We should at least be guilty of great injustice to the *reader*, if not to the *author*, if we attempted to substitute the perusal of a few pages of analysis and quotation for that of works which should not only be read, but ‘ read wholly, and with diligence and attention.’

The subject of the Exposition and the Appendix is full of interest. To the mere observer of the finely-constructed frame of the human body, it presents continual illustrations of the power displayed in producing by the operation of simple causes effects so numerous, and so complicated, as not always to be readily comprehended by the human mind. To him who reflects more deeply on what he beholds, the phenomena with which he thus becomes acquainted excite a higher interest. They cannot be attended to without an

improvement of our powers of observation, and some enlargement of our powers of reasoning on what we daily observe. When they are displayed to us with ability, and a zeal for the advancement of science, as in the present instance, we are led through the legitimate channel of observation, occasionally aided by a few and simple experiments, up to truth. As we proceed, we find our knowledge widening on every side; and at every step we find new cause to admire the power, the wisdom, and the surpassing goodness of Him by whom the structure of man was designed. The most cursory inspection of the body suggests these ideas; and the more intimately it is considered, the stronger confirmation do they receive.

When we say, in addition to this, that many of the facts communicated to the reader, in the pages of the works of which we have spoken, are immediately connected with practical points of importance; and when it is considered how valuable the secure and inalienable possession of knowledge of *all* well-established facts is sure to prove at some conjuncture or other of our professional lives; we think we have said enough to make it appear that Mr. Bell has by these patient and useful labours raised a durable monument to his fame, and has done more than it can possibly fall to the lot of many individuals to do for the promotion of the noble science to which his life has been so zealously devoted.

III.

AN INTRODUCTORY LECTURE ON SURGERY.

An Introductory Lecture to a Course of Surgery, delivered at the Richmond School of Medicine, Dublin, on the 8th day of January, 1827. By RICHARD CARMICHAEL, Esq., M.R.I.A., one of the senior Surgeons of the Richmond Surgical Hospital. Printed at the request of the Pupils. London, 1827.

THIS lecture seems to have been delivered by Mr. Carmichael on the occasion of resuming his public duties, after some interruption from ill health; and it was published in consequence of a petition to that effect, signed by his pupils. We regret to have to confess our ignorance of what takes place in Dublin, to such a degree as only to have learnt from this lecture of the opening of a new school of medicine in that city, called the Richmond School; but any lectures delivered on the occasion of opening such a school, if not exclusively confined to the subject to be treated of in the course, but, as they ought always to be, containing a sort of manifesto of the general views and opinions of the lecturer, re-

garding the questions most interesting to the whole profession at the time they are delivered, must be of sufficient interest to entitle them to notice. A lecture from Dublin is especially entitled to attention, for, from whatever causes it may originate, the concerns of that city are far less known to the medical public of England, than those of Paris, Rome, Berlin, or Vienna. This circumstance is assuredly not attributable to any present want of zeal, exertion, or ability, in the sister island. The medical schools of Dublin, like those of Edinburgh and London, have undoubtedly been, for particular purposes, held forth in the most degrading and opprobrious light; but for this the profession has itself to blame. To such a degree has espionage, scandal, misrepresentation, and downright falsehood, been tolerated, or we should say encouraged, that if a medical student should really pay attention to the accounts that have been given of all the existing schools in this kingdom, he would conclude there was not one worthy of his confidence, and would either determine to go to the continental schools, from which he would return pretty well skilled in anatomy, very ignorant of medicine, and far gone in false philosophy and atheism; or must believe that all the talent of the profession is centered in two or three individuals, who deliver lectures, as it would appear, for immediate publication. We look most anxiously for a healthy reaction in these desperate circumstances; and we know that it *must* take place, even in the capital which has become the polluted fountain from whence so much cheap poison has overflowed the land. In the mean time we turn to Dublin.

The excellence of the Dublin school in some particular departments for many years past, has not been unknown to us; and, far from joining in the common censure of the Irish students for dispersing themselves over Europe, to complete an education which could not perhaps be perfected at home, we look upon their having done so, as being the cause of the present activity, which evinces itself in the capital of their native country. Having received an excellent education, and being well acquainted with the advantages and defects of the different schools of this kingdom and of other countries, they are now able fully to avail themselves of the great opportunities afforded for the improvement of medical and surgical education, by the numerous hospitals and dispensaries with which, amidst all their difficulties, the aristocracy and wealthy classes of Ireland have enriched their capital city, and without which the wretchedness of the suburbs would threaten to annihilate the comfort and health of the whole population; for whatever of science, or of

learning, or of elegance, there may be in the better parts of Dublin, they are surrounded by regions in which ignorance, superstition, discontent, vice, filth, famine, pestilence,—all the worst evils to which our nature is subject,—are continually calling for the strongest exertions of enlightened patriotism and active philanthropy. It is gratifying to think how important a part of this great duty necessarily, and at all times, devolves upon the members of our profession; and quite needless to point out the reciprocal advantage we derive from the opportunities thus afforded of enlarging our powers of alleviating all the miseries of human nature.

The following passage states some of the advantages of Dublin as a medical school, and will be read with interest, even in London.

‘There are twelve respectable hospitals, among which we boast of a lying-in hospital, not equalled in the world for extent, magnificence, and utility; two extensive botanical gardens, with a professor of character and learning attached to each; two public lecturers on chemistry, the one the learned professor of Trinity College, the other of the Dublin Society; and also several private lecturers on chemistry. Besides the school of medicine conjointly formed by the University of Dublin, and the College of Physicians, and the School of Surgery of the College of Surgeons, there are three or four private schools, each containing professors in every branch of medicine; and I trust ere long many others will be added to the number: for we are not to consider that the great advantages that this city affords for the promotion of medical education, are to be restricted to that of raising practitioners for this country alone. We have the means, if we cultivate them as we ought, of educating medical men not only to supply the wants of Ireland, but a great proportion of those destined for the army, navy, the colonies, and, I will say, for England itself; for even to England, I am persuaded, we shall be enabled to supply individuals *superior* in professional acquirements to those who in general fill the ranks of that most useful class of men, the surgeon-apothecaries, to whom, in a great measure, is consigned the chief medical, surgical, and pharmaceutical practice throughout the great, wealthy, and populous provincial towns of this part of the empire.

‘In making this assertion I do not speak unadvisedly, and without consideration. The expense of attending an hospital in London (an attendance on provincial hospitals is not acknowledged by the London College) is, on the lowest average, probably three times greater than that demanded from a pupil for attendance upon the large institutions in this city. Edinburgh, though more economical than London, does not contain an hospital establishment, or a population sufficient for the purpose of extensive chirurgical, or even medical education. The expenses attending anatomical pursuits in London and Edinburgh, from the difficulty of obtaining subjects, is at least six or eight, and not unfrequently, even ten

times greater than in Dublin; often it amounts to an absolute prohibition. So that I feel warranted in my assertion, that the pupils educated in England and Scotland, from the great expense of acquiring anatomical information, are not in general sufficiently grounded in what may be considered the very foundation of medical and chirurgical knowledge; and without which the superstructure, however ornamental, must be frail and tottering. But the advantages of Dublin as a school are already beginning to be known and felt in the sister kingdom. During the peninsular war, the superior anatomical, and, of course, chirurgical knowledge of those army surgeons educated in Dublin, soon attracted the notice of the distinguished individual placed at the head of the army medical establishment; and with a conscientious and honest discharge of the high trust reposed in him, he advanced those men in rank and responsibility, upon whose professional knowledge, when so much was at stake, most reliance could be placed, no matter what was their previous patronage, country, or religion. Those alone were selected who were most capable of affording the best chance of life or limb to the wounded soldier; and in consequence, numbers of our countrymen educated in this city, and filling subordinate situations in the army, were advanced with rapidity to posts of responsibility, rank, and emolument. This naturally opened the eyes of many to the superior advantages afforded by Dublin for the acquisition of surgical and anatomical knowledge; and we have had, consequently, since the war, a number of pupils from England and Scotland annually resorting to our schools; a number which I shall venture to predict will every year increase.'

It is not, however, the mere possession of local advantages, or facilities for the study of anatomy, which will raise any medical school to eminence. The schools of Leyden and Edinburgh owed their first celebrity chiefly to the activity of several able men who were fortunately elected to the professorial chairs; and wherever men of the same character are to be found, *there* will students be found endeavouring to gain information. In whatever school the vacant chairs are filled up with a principal regard to any thing but talent, the reputation of that school must decline. If Leyden fell by supineness, so must Edinburgh and Dublin, if such supineness be found there. We are far from asserting that it is to be found there; indeed, as relates to Edinburgh, we know that many of the professors are no less distinguished by their great industry, than by their learning and judgment; although it is but too notorious that the chairs in that university have, on some occasions, been filled with men who came recommended by interests quite remote from the interests of the profession, the school, or the students. There would seem to be an infatuation about colleges, a deceptive and fatal sense of security, a proud blindness, by which they are

precluded from advancing along with the world without the walls of their ancient institutions; and the consequence is, that every opponent, even of what is good and valuable in them, enters the lists with advantage, and fortified by the popular opinion. The following may be taken as a specimen of a singular delusion, under which the College of Surgeons in Dublin seems to labour; a delusion which it would be no less honourable than conducive to their interests, no less advantageous to them than to the profession, to master and dispel, but to which that body would seem to cling with the most unaccountable pertinacity.

‘Unfortunately our own foolish ordinations have interfered to mar the progress of Dublin as a school of anatomy and surgery. It is natural, and a matter of course, that pupils should wish to receive their diplomas of qualification from those constituted bodies under which they have been educated, and from the hands of those professors and seniors who have observed the progress that each has made in the acquisition of medical and surgical knowledge. This very natural and laudable desire is completely baffled by the charter of the College of Surgeons in Ireland, which enacts that no person shall be admitted to an examination who has not served an apprenticeship to a regularly-educated surgeon; and this is the *only test* of qualification demanded from the pupil by this corporation charter. *No attendance upon lectures; no attendance upon hospitals; no dissections are required by the framers of this wise sample of legislation; and, in fact, at this very moment, in point of law, the president and examiners are bound to examine any man, no matter whether he has ever been inside the walls of an hospital or lecture room. If he has only served an apprenticeship, to what is designated a regularly-educated surgeon, he may demand an examination.*

‘But the framers of the charter forgot, in their wisdom, to define what are the qualifications which render a man a regularly-educated surgeon. Their successors, I presume, taking it for granted that the only qualification to make a regularly-educated surgeon, is an apprenticeship to one, demanded from every pupil who had not been an apprentice to a licentiate or member of the College of Surgeons in Ireland, sufficient documentary evidence that his master not only had been a regularly-educated surgeon, but that he had also served *his* time to a regularly-educated surgeon: and thus I have known the time of the court of examiners occupied, day after day, examining the genealogy of a candidate, even to his professional *great great grandfather!*

‘It is high time for these follies to cease. The spirit of information among the rising generation of surgeons would not brook them a moment, were it not that their own interests are concerned in perpetuating a bondage under which they themselves have suffered.

‘To the credit of the leading men of the profession an attempt

was made within these two years to induce the College to petition Parliament for a new charter, the basis of which was to annul apprenticeships, and in lieu of them to lay down a broad system of education in the various branches of medical studies; and that documentary evidence of attendance upon lectures, dissections, and hospitals, should be the only qualifications demanded from the candidate.

‘Will it be credited, that these projected improvements, which would *tend* to raise surgery from the state of a mechanical trade to a level with the liberal professions, were rejected by a majority almost entirely composed of the younger members of the College; while, at the same time, with scarcely an exception, these most desirable improvements were supported by the senior members—men who were in the actual enjoyment of the advantages which the system of apprenticeship affords; while those who opposed the projected alteration in our charter could only have held them in *prospectu*, and most of these unlikely, from the want of hospitals, ever to have enjoyed them? But, gentlemen, I trust that this degraded state of a liberal profession, requiring for its practice an expanded mind, and extensive information, and allowed to be one of the most useful and honourable which falls to the lot of any body of men to exercise, cannot, whatever be the opposition excited by interested and mercenary motives, much longer continue to be debased to a level with the mere mechanical arts. I appeal to my young hearers, who, in the course of a very few years will have a voice in the affairs of the College. Will they, from the sordid prospect of the chance of putting a few additional pounds in their pockets, perpetuate this degradation of themselves and their profession? Is there one of you, with the liberal education you have received, that does not feel humbled by the necessity of submitting to the yoke of an apprenticeship, which is altogether useless to the master to whom you are indented (except so far as the fee is concerned), and to yourselves for the acquirement of professional knowledge?—would you not, if this base and unnecessary yoke were removed, walk more erect, and hold your heads more high among those juvenile friends who are pursuing their studies in the other liberal professions?’

In these liberal sentiments we cannot but concur; and we imagine the time is not far distant when they will meet with the attention they merit, and lead to salutary reforms.

We are a little amused to find Mr. Carmichael combating for the incontestable truth of the ‘phrenological doctrines.’ On this subject, and concerning ‘the thinking principle,’ it may be said, that Mr. Carmichael is not bound to be very learned. We wish he had not endeavoured to seem so. A man may be a very good surgeon without ever having heard of Gall and Spurzheim; or ever having been able to assign a local residence to the principle of thought. But why are these subjects introduced to a set of raw young men at a

surgical lecture? Are we to suppose, that Mr. Carmichael is desirous of the reputation of a great philosopher? or of avowing himself the Irish surgical advocate of opinions quite as needlessly introduced some time ago into the lectures of an eminent English lecturer? Unless his knowledge of both the subjects we have alluded to be much greater than the few sentences he has devoted to each leads us to suppose, we would recommend their being passed over in future, as well they may, in silence, and never more patched into discourses, which, but for them, may at least be accounted plain and sensible, and written in no illiberal spirit.

And, first, with respect to phrenology. The following is the advice which Mr. Carmichael thinks it proper to give the students of the Richmond School of Medicine :—

‘ To such of you as have a wish to be acquainted with the phrenological doctrines, I would strongly recommend you to read, at your leisure hours, the admirable work of Mr. George Combe, which has already gone through several editions. You will, after perusing this work, feel the littleness of those who scoff at a subject of which they are ignorant. An article, supposed to come from the pen of Mr. Jeffrey, appeared in the *Edinburgh Review* of October last, in which he attacks the system with all the weapons of an experienced controvertist. This drew forth from Mr. Combe an immediate, spirited, and most triumphant reply, in which he not only answered all his adversary’s objections, but convicted him of unfair dealing as a critic,—ignorance of the subject he undertook to criticise,—little depth as a metaphysician—and but slight acquaintance with the opinions even of the school he supports. Phrenology, as defined by Mr. Combe, “ is a system of philosophy of the human mind, adapted to explain the primitive *powers* of feeling which invite mankind to action, and the *capacities* of thinking that guide our actions till we attain the object of our desires.” ’

This advice is surely very injudicious, and conveyed in terms not unsuitable to the counsel. If the object be to gain a knowledge of the refinements of Gall and Spurzheim, then, indeed, Mr. Combe’s book, and Mr. Combe’s book only, may suffice. Furnished with all that can be said in defence of an artificial system, and ignorant of all the philosophical investigations made into the phenomena and operations of the understanding, Mr. Carmichael’s youngest students may soon become most orthodox phrenologists, and make a great figure in a debating society : that is to say, they will be able to make a great many assertions which few people will take upon themselves to contradict. But if the object were to enable them to examine this notorious modern system of metaphysics, then perhaps we might venture to recommend some acquaintance with the writings of Locke, of Condillac, of Reid, of Dugald Stewart.

From these works, and by a careful examination of the movements of their own minds, they would be better able to determine concerning the reasonableness of the thirty-three 'primitive powers' of feeling which invite mankind to action: better able than even Mr. Combe seems to be to tell us why there should be no more: in short, better able to substitute for mental movements of which we are conscious, a variety of 'powers of action' of which we are not conscious. Neither, we conceive, would it be at all disadvantageous to young phrenologists to scrutinise the anatomical pretensions of the great teachers of the doctrine, and to see if the *pathology* of the *organs*, instead of giving any support to their views, does not tend to subvert them altogether. As to Mr. Jeffrey, he is well able to defend himself, which we imagine he will not take the trouble to do until some of his objections, to which no reply has been even *attempted*, are fairly met. We shall not waste much of the time of our readers with any further remarks on this subject; but we must say, that among those who have perused Mr. Combe's *Reply* to Mr. Jeffrey, we have met very few who have read the article in the *Edinburgh Review* which occasioned it; and which, with whatever faults it may be charged, contains, we honestly think, such illustrations of the absurdity of phrenology and phrenologists, as cannot by any sophistry, any hardihood of assertion, or any abuse, be weakened, or put aside, or evaded. When Mr. Carmichael again quotes Mr. Combe's definition of phrenology, we think he would be doing a great service to the students, as well as to us, by explaining it. We can attach no ideas to the words '*powers of feeling*,' and '*capacities of thinking*.' It would also be consoling to know whether the different parties in this unerring science of observation have made up their minds concerning the *disputed* organs; for the existence of *two* infallible heads of the church was not a greater scandal in theology, than is the invariable existence of certain bumps which in one country are *observed* to be the indications of *one* 'power of action,' and in another country are as invariably observed to be the indicative bumps of *another* 'power of action.'

But we have something more to quote on the same subject.

'Hitherto philosophers and metaphysicians have considered the mind as uninfluenced and unconnected with the body. They have treated "the thinking principle as a disembodied spirit." The phrenologist, on the contrary, "regards man as he exists in this sublunary world; and desires to investigate the laws which regulate the connexions between the organs and the mind, but without attempting to discover the essence of either, or the manner in which they are united."

‘After the lapse and labour of more than two thousand years, metaphysicians are not yet agreed concerning the existence of many of the most important principles of action, and intellectual powers of man. Instead of obtaining rules by which to discriminate the effects produced upon the character and conduct of individuals by different combinations of the mental powers, we find the works of philosophers on the mind to be only a never-ending series of disputes whether such differences do exist in nature, or are the result of education, and other adventitious circumstances. Gall and Spurzheim have ascertained from observation *primitive faculties of the mind* so simple, as not to have been thought of by the philosophers of the old school; and they conceive, that they have also, from observation, ascertained the parts of the brain where each primitive faculty resides. It would lead me too far to enter deeper into a consideration of this interesting subject. Suffice it to say, that it is a study closely connected with the various applications of medical knowledge, and, therefore, well worthy of the attention of the scientific practitioner. Their mode of dissecting the brain is, however, I am bold enough to say, the only one that ought to be pursued, and will be that adopted in this school. The old method we will of course shew you, as long as you are likely to be examined in it; although we might as well engage to dissect the muscles of an extremity by cutting them across, as to demonstrate the nervous fibres of the brain according to the old, and I am confident I shall soon have the opportunity of saying obsolete, method.’

Now the above passage commences with an assertion quite worthy, by its boldness, of the most redoubtable phrenologist that ever lived. If Mr. Carmichael *really* thinks that the philosophers and metaphysicians before the days of Gall and Spurzheim ‘considered the mind as uninfluenced and unconnected with the body,’ we greatly fear his acquaintance with the works of either philosophers or physicians has been made through the medium of the bigotted disciples of these two tolerably clever but desperately vain men. Here, again, we discern an ambitious attempt to preach an imposing philosophy, which does not seem justified by any previous, or any serious consideration of the possibility of the mind being distinct from the body, and yet limited in its manifestations by corporeal structure and accidents. The sages of this great school, we suppose, deny the possibility of what is commonly called a *mental impression*; but if they do not, we should be very glad to hear their explanation of it. As to the ‘*primitive faculties*’ of the mind discovered by the phrenologists, ‘so simple as not to have been thought of by the philosophers of the old school,’ we go further than Mr. Carmichael, and ascribe to Messrs. Gall and Spurzheim not the discovery of such primitive faculties, but the invention of them. We take the organ of *weight* to illustrate our meaning: whether

the faculty assigned to this organ is a 'power of action,' or a 'capacity of feeling,' we do not quite understand: we rather suppose the latter: but if there be any dependance to be placed on experience, all the use of this imaginary faculty is to effect what the mere exercise of the sense of touch effects every day. A grocer in good business will tell you the weight of a piece of sugar within half a pound: a clever druggist's apprentice will weigh out calomel, or James's powder, on the point of a knife with most admired accuracy: now the older philosophers and metaphysicians did certainly never think of searching the heads of people to find why they should become so clever behind the counter; but Gall and Spurzheim 'ascertained from observation,' that the sense of weight was a primitive faculty, and depended on a convolution of the brain, which might or *might not* be well developed, but *must* be very active, in the druggist and the grocer. This was doubtless a very meritorious and useful discovery, and 'closely connected with the various applications of medical knowledge.' As to their dissection of the brain, which is *not* theirs, we assent to its propriety, and to the merit of having recommended it they will continue entitled long after their bumps are deposited, among other lost things, in the moon.

Several pages of the Lecture are devoted to enforcing the very novel and ingenious doctrine that a physician should not be ignorant of surgery, and that a surgeon should not be ignorant of physic. We profess ourselves to be somewhat puzzled to account for this waste of eloquence, or to ascribe the orations delivered in London concerning the same truisms to any thing like a probable cause. Unless it can be shewn, that modern physicians are ignorant of surgery, and modern surgeons ignorant of physic, we do not see why the public ear should be deafened with reiterated assurances, that the inside and the outside of the body belong to the same individual, and acknowledge the same laws. The clamour seems at present confined to the surgeons, and they can best explain what it means. Of the separation of physic and surgery in practice, they all seem to approve; and it is on this account still more difficult to know what they really wish to do. If they imagine, that they alone would benefit by levelling all ranks of the profession to one, they are grievously mistaken. The public care very little for the title of physician or surgeon, as far as mere rank is concerned; and every man rises or falls eventually into the station for which his education and talents have fitted him: if well-educated physicians, therefore, were permitted in ordinary cases to encroach on the surgeon or family apothecary, those who now cry out so loudly for equality, would soon find it

would have been wiser to pursue their trade in silence. Here, again, we perceive Mr. Carmichael's admirable talent for imitation, and even in the words and phrases in which he has discharged his dislike of men whom he calls the *virī graves et docti* with as much self-complacent sarcasm, as if to be learned and serious was not the object of the Richmond School of Medicine.

Passing over these instances of mistaken spirit and bad taste, we turn with pleasure to what appears more original in the lecturer, and have much pleasure in giving insertion to the conclusion of his lecture.

‘ We would wish to impress upon your minds, that the profession which you are about to commence is one which demands from the starting-post unremitting labour to acquire the necessary knowledge which will enable you to enter upon practice with a conscientious feeling that you are really qualified for the task. It may be years perhaps before you begin to reap any return for the expense and labour bestowed upon your education; let these years not be spent in vain regrets, that the world is unacquainted with your talents and acquirements, but in adding to your stock of knowledge, not only in professional information, but in those various branches of science immediately connected with your profession. Chemistry, mineralogy, botany, zoology, and comparative anatomy, may most usefully occupy your time. Our profession naturally leads, more than any other, to a consideration of the wonderful works of nature, which has occasioned the remark of Johnson, that he knew no men in society so generally well informed as those of the medical profession. I say again, make good use of this period of leisure; for when professional business begins to flow in on you, you will find but little time for literary pursuits.

‘ The commencement of practice is always to the young practitioner a state of anxiety, vexation, and disappointment. He begins the world tremblingly alive to the slightest event which may affect his professional character; and trifles, such as disappointment in the powers of a medicine, the peevish and unanswerable questions of patients and their friends, which, when he advances in practice, would only occasion a smile, give him now many a sleepless night. He observes, perhaps, a fellow-pupil,—known to have passed in idleness, revelry, and dissipation, those hours which *he* spent in assiduous labours by day at the dissecting table, the hospital, or the lecture-room, and at night beside his solitary lamp,—rapidly pass by him in the road to professional emolument and fame. And what is still more galling than even this, he finds the patient, who is perhaps indebted to his skill and assiduous attention for his life, betray an ungrateful want of confidence towards his preserver, and bestow it perhaps on some ignorant pretender, who, through patronage, or worldly tact, or the tricks of charlatanry, has managed to make the world believe that he is the great Esculapius of the age. Let him not lose his equanimity under all these mortifications: a

few years roll on, and the man well-grounded in his profession will feel himself steadfast on the pyramid of public estimation,—the basis of which is formed by the universal suffrage of the poor, and the apex by that of the aristocracy of the country. The shallowness of the man of patronage is sooner or later discovered in spite of patronising friends: these even at length slip from his support; and as his professional character has not grown out of the well-earned favour of the multitude, like that of his more deserving competitors, there are no saving hands numerous and strong enough to elevate him above the common mass of mankind, and he sinks to his natural level, never to rise again. Yes, gentlemen, this is no fiction, manufactured for your amusement. The history of professional men in every realm, and at every period, attests the truth of the story. Let each of you recollect it when about to sacrifice your duties to your pleasures, and I shall not have lectured to you this day in vain.'

This is sound and sensible advice, and cannot be perused without exciting respect for the lecturer,—and, at the same time, sincere regret that he should have interlarded his discourse with empty syllables, opposed equally to true independence and good sense; and which, although the young men who listened to them might fancy them 'admirable for their bold and manly exposition of principles,' seem to us but the vapourings of discontent, and a vigorous combating of and for mere shadows.

PART II.

COLLECTIONS OF MEDICAL FACTS, WITH OBSERVATIONS.

SECTION I.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND FOREIGN, WITH REMARKS.

I. Account of a Child who took Stramonium. By CH. D. MEIGS, M.D.

'I BELIEVE that examples of poisoning by stramonium are not very common: certainly accounts of this affection are not so very numerous as to have become fatiguing; and as there is some difference in the statements of symptoms produced by the use of this weed, I have related the case below. When I was a student of medicine, my teacher, who was much employed in practice, took me to see a young girl who had swallowed a number of seeds for the purpose of self-destruction. She was insensible, completely tetanic, and had a very dilated pupil. She recovered. I recollect that Dr. Fendall had never seen but one case before.

‘ The effect produced by stramonium on some of the first settlers of Virginia, was a high degree of intoxication.

‘ The case which I am going to describe occurred in a girl two years and a half old, daughter of Mr. C. Stelwagen. On the 24th of October, 1824, (forenoon,) she had found a small bag, containing stramonium seeds, of which she ate an unknown quantity. The first symptom was a high degree of exhilaration, in which she excited much merriment by her extravagant gestures and speeches. This soon became alarming; and when I was called to see her she was laughing, crying, and singing, by turns, proceeding from one to the other state with the greatest rapidity. She occasionally started with great force and alarm, crying out that she was going to fall; when she would cling to her mother with as much desperation as if she was about to be thrown from a precipice. She would next become calm, then whistle, and afterwards point with her finger at *muscæ volitantes*, which she followed with the eye and hand, at last clutching at them, with an appearance of disappointment at the want of success.

‘ The colour of her face was of a scarlet red. I have certainly never seen so intense a red in scarlatina. Her skin was hot; pulse much accelerated; and tongue and fauces dry and red; the former was so dry that it glistened. The face, neck, and breast, were covered with hundreds of small brilliant petechiæ, many of which had a stellated form.

‘ After an emetic, which operated very well, and brought up only one seed, I gave her senna infusion, with repeated enemata. The nurse told me she had found forty seeds in the evacuated matters.

‘ The cerebral symptoms I have described gradually diminished, till midnight, when she fell asleep. On the 25th, she was tolerably well. The petechiæ were still quite evident, not being much changed. A troublesome itching of the whole skin, which came on yesterday, was gone.—27th. The child is well, but the petechiæ are not gone.

‘ Nov. 4th. They are no longer visible.’—(*North American Med. and Surg. Journal for January.*)

II. Vaccination of Animals.

‘ THIS operation was practised by M. Gohier on the hog, cat, rabbit, and domestic fowl. The experiments of Dr. Jenner on the grease of horses are in the memory of many of our readers; and a Dr. Sacco had also published some experiments of a similar kind. Dr. Numan, professor in the Veterinary School of Utrecht, has applied the vaccine to a number of animals, with the view of studying the results thereby produced; and publishes his observations in a pamphlet.

‘ The vaccine has been repeatedly observed in Holland among persons employed in attending to cows.

‘ In cows, three or four insertions were made by our author in each teat, with matter obtained, either directly from other cows, or

from children who had undergone the artificial process. The punctures inflamed; and in three or four days afterwards the vesicles began to extend, until they had reached their acme,—which took place on the eighth or ninth day, yielding unquestionable vaccine matter, possessed of the power of transmitting the disease to the human subject. The vesicles often extended four or five-twelfths of an inch in the direction of the length of the wound (*un développement de 4 ou 5 lignes dans le sens de la plaie*); but were frequently smaller. The scab separated on the eighteenth to the twentieth day. In many cows, there was no areola; in others, a very visible one. This irregularity was in part ascribed to the dark colour of many of the teats, which disguised, and perhaps often entirely concealed the redness of the inflammation. No eruption was observed either in the vicinity of the punctures, or more remotely. A slight heat was observed in the ears and horns; and some acceleration took place in the circulation. The appetite and rumination were not changed.

‘*The Bull.*—Mundigh and Hosacker deny the possibility of communicating the vaccine to the bull; while Bergman asserts its practicability. Viborg communicated it to a buffalo; and Dr. Sacco to young bulls, but could not do the same to old ones. Dr. Numan succeeded in producing a very regular vaccine in the scrotum of a bull, and in communicating the disease from this animal to cows, though he failed in a young child.

‘*The Horse.*—It is found by experience, that the vaccine will originate in cows that feed in pastures where there are no horses; so that the opinion which ascribes the origin of this disease to the affection of horses termed “grease,” must be erroneous. Nevertheless, Viborg found that he could produce vesicles (*boutons*), in the teat of the cow, by inoculation with the matter of “grease,” (called *mok* in Holland,) not only in the original place of insertion, but around it. Similar trials made in the metatarsus of horses with the vaccine matter, produced vesicles of a kind closely resembling the ordinary vaccine. Horses never took this affection more than once; and they underwent no perceptible disturbance of their general health.

‘*The Ass.*—These animals are subject to the “grease;” but inoculation with the matter thus produced has never effected a real vaccine in cows. When vaccinated themselves, they are affected with more facility than horses, probably owing to the comparative thinness of their skin; and the pus (lymph? the French frequently do not distinguish clearly between *pustules* and *vesicles*), when inserted in the teats of cows, produced more abundant pustules than their own vaccine. The matter of these again communicated an analogous disease to horses, and to other cows.

‘The *vaccino-equine* and *vaccino-asinine* matters did not affect man with so much certainty as the ordinary vaccine matter; and frequently failed altogether. One crust, however, of *vaccino-equine* matter, but taken from a horse affected with grease, produced a real vaccine, which was propagated to a great number of infants.

' A camel was inoculated with vaccino-equine, and with real vaccine from a child. Both took; the former with some difficulty. On inserting the matter of these into a cow, the former took; and the vesicles formed served again to produce others in a goat.

' In the goat, the matter from the camel produced vesicles in the belly, and a few upon the right teat. That from a female ass communicated them to the belly, but not to the teat. Some of these, of which species we are not told, communicated vaccine vesicles to a child, at the second inoculation, two insertions being made each time.

' Vaccination succeeds in the sheep; but it does not preserve them from the rot: this effect may be produced by inoculation with the matter of the rot. They take vaccination with more difficulty than goats. Cows and the human species have never taken the vaccine by inoculation from sheep, though repeated attempts have been made.

' Hogs will take vaccination, but not communicate it to our species.

' A baboon, *Papio Nemestrinus* of Cuvier, took vaccination; but the vesicles began to diminish on the seventh day. Two insertions of the matter being made in a child, one of them presented a beautiful vaccine.'—(*North American Medical and Surgical Journal for January.*)

III. Vaccine Society of Philadelphia.

' THE important results arising from this association, in checking the mortality and lessening the evils of the small-pox, are strikingly demonstrated by the annual official reports of the Board of Health; from which it appears, that there died of this loathsome disease, in the city of Philadelphia, Northern Liberties, and Southwark:

| | | | | | |
|-----------|---|-------------|---------|---|--------|
| ' In 1807 | - | 32 persons, | In 1810 | - | 140 |
| 1808 | - | 145 | 1811 | - | 117 |
| 1809 | - | 101 | 1812 | - | NONE.' |

(*North American Med. and Surg. Journal for January.*)

IV. Variolæ Vaccinæ in the Horse.

' THE skin of the horse is subject to an eruptive disease of a vesicular character, which vesicle contains a limpid fluid, shewing itself most commonly in the heels. The legs first become œdematous; and then fissures are observed. The skin contiguous to these fissures, when accurately examined, is seen studded with small vesicles surrounded by an areola. These vesicles contain the specific fluid. It is the ill-management of the horse in the stable that occasions the malady to appear more frequently in the heel than in other parts: I have detected it connected with a sore on the neck of the horse, and on the thigh of a colt.'—(*Life of Dr. Jenner.*)

V. Académie Royale de Médecine, January 20, 1827.

Experiments upon the Inoculation of Small-Pox.—M. de Kergader read a letter, dated January 4, 1827, from M. Guillon, an

old navy surgeon, and vaccinator of the canton of St. Pol de Léon. This practitioner announces, that having no vaccine virus during a very fatal small-pox epidemic, he took on the 17th of December, 1826, *some variolous matter* from a girl fifteen years of age, *on the fifth day of the eruption*, and he inserted it in ten places on the arm of a healthy infant still at the breast. This inoculation, M. Guillon says, produced ten beautiful *vaccine vesicles*, with which, on the ninth day, forty-two infants were inoculated, under the eyes of the local authorities: these furnished virus for the inoculation of one hundred, who were inoculated on the 3d of January, in the presence of the magistrates and many medical men.

In a second letter, dated the 16th of January, 1827, he observes: 'The numerous vaccinations (inoculations with variolous matter) effected since my discovery, confirm more and more the perfect identity of the variolous with the vaccine virus. I am convinced, that the variolous matter has more energy and activity than the vaccine, since it is very rare to fail with it, even in the depth of winter. Every point in which matter is inserted proceeds well, and in their intervals in many individuals an eruption of variolous pustules takes place, and produces fever.

'It is essential to observe, that all the individuals who have been thus vaccinated remain safe from variolous infection.'—(*Journal Générale de Médecine, Février 1827.*)

In a former department of this Journal, we have stated at some length the opinion of Dr. Jenner respecting the identity of the variolous and vaccine eruptions. The details of the above statement are not sufficient to enable us to decide upon the real value of the proposed mode of inoculation; but the confession that pustules do occur, and that there is fever, manifestly renders the greatest care necessary in recurring to it.—EDITORS.

Polypi and Caries of the Auditory Canal.—M. Cloquet communicated the case of a child two years and a half old, which had been brought to him with polypi in the auditory canal. After the extirpation of the polypi, M. Cloquet observed that the parietes of the canal were ulcerated; and that portions of imperfectly detached bones indicated a caries. Many fragments were extracted; the auditory canal was cleansed; suppuration diminished; and the patient was cured. The hearing was not quite destroyed.—(*Journal Générale de Médecine, Février 1827.*)

VI. *Formation of an Artificial Urethra, on account of a Malformation of the Genital Organs.*

THE subject of this case was an infant with malformed penis. The gland was merely a rudiment; the prepuce was wanting; the extremity of the gland, with a trace of an urethral orifice, was found at the inferior edge of the corona glandis: the penis was of its usual length, but there was no opening on its surface. An incision made upon the cleft which indicated the orifice of the urethra, conducted to no result. On the third day, the subpubic region was

rather tense; M. Rublach then made an incision into the canal of the urethra under the gland, and penetrated with difficulty, in the direction of the canal, through three-fourths of its length. A few drops of blood only followed; the abdomen swelled more, and the infant was restless: at night, a quantity of urine was suddenly expelled by the rectum, and the tension of the abdomen ceased. The next day, M. Rublach proposed to make an artificial canal through the penis, and he obtained a silver flexible sound, the end of which was flattened, and had a cutting edge. This sound pushed with difficulty in the direction of the neck of the bladder at length entered its cavity: the urine flowed immediately after; the sound was left in for some time; and the urine, ceasing to flow through the rectum, was discharged by the artificial passage which had been made by the operation.—(*From the Magazin für die Gesamte Heilkunde; in the Bulletin des Sciences Médicales for Fevrier 1827.*)

VII. Extraordinary Case of Chronic Inflammation of the Omentum and the Cellular Tissue of the Abdomen, in a young Girl who was incapable of Conceiving, but was reputed Pregnant. By G. STRAMBIO.

MADemoiselle TAINI was born at the full period, and to all appearances healthy and well formed. At fourteen months old she was weaned; she was then thin, pale, and with a large abdomen. The catamenia appeared at twelve years of age, returned regularly for twenty months, and were suppressed at this time for five months. In consequence of participating in the gaieties of the carnival, she began to complain of pain in the right side of the abdomen, the size of which rapidly increased, and produced a suspicion of pregnancy: the reproaches of her parents aggravated her sufferings; purgatives had been administered without any alleviation,—when M. Strambio was called in towards the latter end of March 1822. She was then eighteen years of age, and had kept her bed for several days. Her face was pale; pulse hard, and frequent; skin burning; vomiting caused by taking food; the abdomen very voluminous, and more prominent on the right than on the left side; and on attentive examination, several hard and indolent tumours were manifest; pain was only produced in the subjacent parts by strong pressure. The left breast had disappeared; the right had for some weeks before augmented in size, and was tuberculated like the abdomen. Affection of the glandular lymphatic system, and violent inflammation of the stomach and bowels. An antiphlogistic treatment was pursued. A tumour, the size of an egg, on the right side of the rectum, prevented the introduction of a syringe or of the finger. Hydrothorax and anasarca ensued; and finally death, on the 22d of April.

The body was examined the next day. A great quantity of serum was found in the cavities of the pleuræ and of the pericardium; the lungs were in their natural state, or perhaps rather more flaccid. Nothing remarkable was discovered in the peritoneum. The sto-

mach and intestines were filled with gas, and greatly inflamed; the omentum, detached from the viscera to which it adhered, had degenerated into a substance furrowed on its surface, very white both externally and internally, divided by portions of thin membranes and striae of a pale rose colour, inodorous; it was elastic, and did not retain the impression of the finger; it was neither fat nor sebaceous, but medullary in its appearance. It occupied all the lower part of the abdomen to the umbilical region. It was disposed in separate masses, connected by membranous bands or cellular tissue. The left kidney, the spleen, the abdominal aorta, the intestinum rectum, of which the calibre was almost obliterated, the ovary and the uterus, which, according to M. Paletto, were in the virgin state, were imbedded in this substance. It obstructed the vagina two inches above the external orifice, and had completely obliterated the remainder of the canal. The mesentery, the liver, the kidneys, the spleen, and the bladder, were without alteration; the spleen was pale, but not increased in size; the right breast exhibited precisely the same appearance as the omentum.—(*From the Annali di Medicina fisol, Pathol. in Bulletin des Sciences Médicales, Fevrier 1827.*)

VIII. *Case of Vesical Petrification.* By C. L. CATRA, Student of Surgery.

AN individual introduced a dry bean (*licia faba*) into the urethra, and was unable to extract it. It reached the bladder, and became the nucleus of a calculus, for which the operation of lithotomy was performed. The foreign body, situated in the centre of the cælostrata, had five lines in diameter. Its original form was rather altered, and it was more round; the epidermis was black; the cotyledons were unchanged.—(*Annali Univ. di Med. July 1826, in Bulletin des Sciences Médicales, Fevrier 1827.*)

IX. *Upon the Formation of Sand in the Plexus Choroides of the Lateral Ventricles of the Brain.* By DR. BERGMAN.

DR. BERGMAN has presented to the Royal Society of Gottingen a memoir, in which he relates twenty cases of earthy concretions in the plexus choroides in lunatics. They resemble the concretions of the pineal gland. M. Stromeyer has analysed both species, and has obtained the following result:—

‘Phosphate of lime in great quantity; a little phosphate of magnesia; traces of carbonate of lime; and an animal matter of an albuminous nature.’—(*Goetting. gelehrte Auzeig, Janv. 1826.*)

X. *Clinique de la Pitié.*

TWO instances of cancerous affection of the stomach are reported as having occurred in this hospital, without any very marked symptom during life. One of them had many signs of gastric derangement on his admission, as loss of appetite, bitter taste, and constipation. The tongue was clean; there was urgent thirst, and

considerable emaciation. The heat was natural; the skin dry and rugous; and the abdomen in some points painful. His digestion was imperfect. Alvine evacuations were procured with difficulty, but afforded some relief. The thirst, and a sense of weight in the stomach, were constantly oppressive. His countenance was pallid. Once during his illness vomiting occurred, but apparently gave him ease. Emaciation was extreme; his pulse fluttered; and at length death ensued. To the last moment he complained of a tormenting thirst.

Upon examination of the body after death, an extensive cancerous ulcer was found occupying the pylorus. The gall bladder was filled with inspissated bile, of which not a drop could escape through the biliary ducts. Small cancerous tubercles were spread over the surface of the peritoneum. The intestinal tube exhibited nothing particular.

The other patient had remarked a difficulty in his digestion for many months, although his appetite continued good. Very soon, a constant acute pain compelled him to bend forwards in walking. He had not urgent thirst, but had occasional vomitings. The alvine evacuations were rare. Together with these symptoms, the tongue was brown and furred; but the point and edges were not red. The countenance was pale; there was frequent vomiting of an acid matter, but no sensibility in the epigastrium upon pressure. Diarrhœa latterly ensued, and death.

On opening the body, a large cancerous ulcer was noticed, occupying the middle space of the gastric surface, and near to the pylorus.—(*Nouvelle Bibliothèque Médicale, Février 1827.*)

In the same journal a paper is contained, upon the employment of circular ligatures for the cure of intermittent fever. There is much grave trifling in it, but nothing to render it worthy of particular notice. That the paroxysms have been suspended upon the application of the ligatures, need not be denied; but, judging from the evidence, any thing else that would strongly excite the mind would have a similar effect. The paper in question is manufactured, however, *secundum artem*, quite legitimately. There are propositions, and doubts, and cases, and reflections,—all in the very best style, and a report upon the memoir, and a note by the editor upon the report; and, in short, every thing but sound reasoning, or common sense.—EDITORS.

XI. Case of the Rupture of the Liver, without Inflammation or Suppuration. By DR. GUERARD, jun.

J. KIEF had been attacked, in July 1824, with typhus fever, which was at first complicated with gastric symptoms. Nothing particular occurred till the twenty-first day of the disease, which was marked by a perfect crisis, by perspiration and urine. The fever disappeared from this period, and the patient's strength was so recovered that he could sit up for several hours. He complained of nothing during his convalescence, and tonics were administered;

but on the ninth day from the crisis he suddenly experienced severe colic, with urgent tenesmus, and expired almost immediately. The body was examined the next day.

The exterior of the body presented nothing particular. On opening the abdomen, five or six pounds of blood were found, partly coagulated and partly fluid, dispersed throughout the cavity. The right hypochondrium contained the greatest part of this blood; and, on examining the liver, a fissure was observable in its substance, surrounded with, and partly closed by, coagulated blood. The organ was of the usual size, but rather pale. Nothing peculiar was visible on its inferior surface, but on the right side of the suspensory ligament, the peritoneum, which covers the liver, was separated by the extravasated blood to the extent of four or five inches. The prominence formed by this separation of the peritoneum extended transversely to the obtuse edge of the liver; and in this place there was a rupture two inches and a half in length, from before backwards. A little more backwards, and to the right side, there was a fissure, an inch in length, in the substance of the liver. The fissure was in a strait direction from before backwards; its edges were fresh, and without any alteration in the substance of the liver.

The hepatic veins having been examined from their origin to their termination in the vena cava, a rupture was visible in one, which was the size of a quill, and the opening, nearly an inch long, corresponded to the fissure in the substance of the liver. Two irregular cavities, each containing about two ounces and a half of coagulated blood, extended from the opening of the vein into the substance of the liver. The structure in other respects was perfectly natural.—(*Journal Générale de Médecine pour Hans Archiv. für Med. Erfahrung, March and April, 1826.*)

XII. *Removal of the Os Astragalus.*

‘DR. ALEXANDER H. STEVENS, professor of surgery in New York, removed, last summer, the astragalus, after a compound luxation of the ankle joint, otherwise irreducible. The man has recovered, with very trifling deformity of the foot, and with a *flexible joint*. He walks with very slight lameness.’—(*Extract of a Letter to one of the Editors of the North American Medical and Surgical Journal for January.*)

XIII. *Some Directions for Making and Keeping Morbid Anatomical Preparations in Hot Climates.* By JOHN DAVY, M.D., F.R.S.

It is too generally supposed that the making and keeping of anatomical preparations in warm climates is almost impossible, or attended with so much difficulty as to be practically impossible with the ordinary means within the reach of medical officers.

This is a very mistaken notion. The changes which animal matter undergoes at a temperature between 80° and 90° Fahrenheit, (the average maximum of the highest temperature in the hottest

seasons, even in intertropical climates), do not differ in *kind*, from those which occur at a temperature between 45° and $51^{\circ} 1'$, and *a fortiori* between 55° and 70° , which may be considered the average temperature of the winter and summer seasons in Great Britain. The difference, then, in the changes is chiefly in *degree*; in a hot climate they take place more rapidly than in a temperate one, twice or thrice as rapidly, according to the elevation of temperature. This should always be kept in mind as a maxim and principle; and to insure success in making anatomical preparations, the rapidity of change of animal matter must be met with proportional quickness and energy of the conservative processes of art opposed to the destructive ones of nature. With the same view, and against the same tendency to change and decompose, besides quickness, great neatness and cleanliness are requisite.

' The methods of proceeding in preserving preparations, must, to a certain extent, be modified agreeably to the nature of the morbid parts, and agreeably to the intention of the anatomist.

' If the diseased part is small, and it is wished to preserve its colour, as a portion of inflamed and ulcerated stomach or intestine, it should be immersed immediately in strong spirit; and instantly put up as it is intended it should remain. After a month, the spirit may be changed for fresh spirit, and the mouth of the vessel should be firmly secured. The blood in the part will thus be coagulated and preserved; the shape will be retained without unseemly distortions, which, when once rigid, are not easily removed; and the preparation is fit for the shelf of the museum without any farther trouble.

' Preparations of the brain, spinal chord, and nerves, should be treated in the same manner, and so treated they are most easily kept.

' Thus also should be managed preparations of the eye, pleuræ, peritoneum, testes and their tunics; and, in fact, all such parts as are liable to be injured by maceration in water, and incipient putrefaction.

' On the contrary, parts containing much blood, as the liver, kidneys, lungs, heart, or stained and discoloured with blood or bile, &c., as the blood-vessels and gall-bladders, &c.; or smeared with a lubricating fluid, as the aspera arteria, primæ viæ, synovial membranes, &c. should be allowed to macerate in water till fit to be removed into spirits; of course, the hotter the weather, so much the shorter must be the time of maceration, and so much more frequently must the water be changed, as often as daily, or twice or thrice daily. And if the part be bulky and much gorged with blood, to insure success, to prevent putrefaction during the period of maceration, either a mixture of equal parts of proof spirit and water, or saturated brine, should be used in place of water alone.

' If the latter (the brine) is to be employed, it should be in readiness before the dissection is commenced, and the part should

be immersed in it as soon as it is taken from the body : farther, it should be exposed as short a time as possible to the air, and should *not be washed* before it is put into the brine.

‘ With these precautions, the part may be macerated till all the soluble matter is removed, (changing the brine twice or thrice), and it is rendered fit for keeping either in spirit or in brine. If the former is preferred, it should be formed of seventy parts rectified spirit, and thirty of water ; if the latter, the brine should be saturated with common salt. The proportion of rectified spirit just mentioned is found to answer best for preserving preparations in general ; and it is hardly necessary to add, that unless the brine is saturated, it will fail of the desired effect.

‘ For the useful purposes of a museum, it is necessary that the part to be kept should be not only carefully and neatly dissected out, but also carefully and neatly put up, and *that immediately*, and as it is intended it should appear on the shelf. If this be neglected at the moment, the season for doing it in perfection is lost. A preparation crammed into a bottle just large enough to hold it, or thrown into spirits in a large vessel, as has been too often done, without attention to suspending it in a natural way, that it may be properly seen, becomes (unless it be some very simple structure) misshapen, distorted, and confused. A preparation in such a state no skill can afterwards amend ; as is very well known to those who have had occasion to attempt the annoying task of endeavouring “ to make something ” of a preparation, perhaps highly interesting in itself, which has been thus neglected in the first instance. Instead of many glass vessels, one or two are amply sufficient for holding all the preparations a professional man is likely to be able to collect in one year in the course of his ordinary practice.

‘ A glass vessel of the capacity of a gallon, with a large mouth closed either with cork and bladder, or a glass stopper, is very convenient for the object in question ;—and it may be desirable for two of them to be constantly provided, one for the purposes of maceration, the other for those of preservation. The preparation neatly dissected may be advantageously attached by a thread to a piece of cork that will float on the surface of the spirit, and keep the preparation properly suspended ; or, if the preparation is lighter than spirit, as a portion of lung containing air, the same object may be effected by fastening it to a bit of lead.

‘ In this way a great many preparations may be introduced into the same vessel,—indeed the vessel may be almost filled with them without detriment, provided each is free, and not pressed against by another, which is easily managed by using threads of different lengths. This method, it may be added, is particularly well adapted for sending preparations to England, on account of its economy, the little space required, and its security. Using it, there is no danger of the preparations being left dry and ruined by the capillary action of threads (having their ends out of the bottle)

sucking up the spirit and draining the vessel; nor is there any danger of atmospheric air finding admission, provided the glass stopple or cork with which the bottle is closed is covered with moist bladder, firmly tied down, and smeared with oil when dry. Here a caution may be given, that when the bladder is thus used, the bottles should be placed out of the reach of rats, mice, and cockroaches, animals very fond of this membrane, and who attack it whenever it comes in their way.

Numbers, written with a lead pencil on slips of paper, parchment, wood, or even the cork itself, may be introduced with the preparations, when they are numerous, and there is any apprehension of mistake; which numbers will of course have reference to a descriptive list that should accompany the preparations to England.

Relative to the making of dry preparations in hot climates it will be sufficient to offer a very few observations. The unexperienced in these climates may fancy the task in question exceedingly easy, from a common and erroneous association of the ideas of proximity to the sun and parching heat. They will find it, however, a more difficult labour than can be imagined *à priori*; and for this reason, that the connexion of heat and dryness just now alluded to is in most hot climates of rarer occurrence than the association of high temperature with a great degree of humidity. This latter happens when the wind sweeps on its way over a great extent of sea, and on its passage becomes loaded with moisture, as is the case with the S. W. monsoon along the coast of India, the S. E. or Sirocco in the Mediterranean, and the sea breeze in the West India Islands. During the prevalence of these winds it is very difficult to dry any anatomical preparation, and impossible, indeed, unless recourse is had to some helping circumstance, as exposure to the direct rays of the sun, or the dry heat of a charcoal fire. On the contrary, when the atmospheric heat is accompanied with dryness, as it always is when the wind comes over an extensive tract of country, such as the land-wind in India, the N. W. wind in the Ionian Islands, and the S. E. on the western shore of Southern Africa, then the making of dry preparations is most easy; exposure to the wind is by itself sufficient. When dry, in every instance, the preparations should be varnished to defend them from the action of the atmosphere, and from the effect of vicissitudes in point of humidity; and then they should be carefully packed up in dried paper, in a box of tight construction, to be sent home by the first opportunity.

As dry preparations of morbid parts, with the exception of bones, are of comparatively little value, nothing that is particularly interesting capable of being kept in spirits should be preserved in any other way.—(*Edinburgh Medical and Surgical Journal*.)

XIV. *Comparative Number of Male and Female Children, &c.*

THE following table exhibits the number of cases that have come under my care during the course of seven years, with the com-

parative number of male and female children, natural children, twins, forceps cases, still-births, and breech presentations.

| | | Sons. | Daughters. | Total. | Illegi- timates. | Cases of Twins. | Forceps. | Dead born. | Breech presenta. |
|------|---------|-------|------------|--------|---------------------|--------------------|----------|---------------|---------------------|
| Aug. | 1818 .. | 12 | + | 14 = | 26 .. | 2 .. | 2 .. | 2 .. | 2 .. |
| Jan. | 1819 .. | 67 | + | 44 = | 111 .. | 5 .. | 3 .. | 5 .. | 3 .. |
| — | 1820 .. | 56 | + | 41 = | 97 .. | 7 .. | 3 .. | 7 .. | 5 .. |
| — | 1821 .. | 57 | + | 74 = | 131 .. | 3 .. | .. | 3 .. | 3 .. |
| — | 1822 .. | 55 | + | 69 = | 124 .. | 6 .. | 1 .. | 3 .. | 3 .. |
| — | 1823 .. | 73 | + | 68 = | 141 .. | 12 .. | 2 .. | 4 .. | 2 .. |
| — | 1824 .. | 88 | + | 55 = | 143 .. | 7 .. | 1 .. | 4 .. | .. |
| — | 1825 .. | 68 | + | 65 = | 133 .. | .. | 3 .. | 9 .. | .. |
| | | 476 | + | 430 = | 906 .. | 42 .. | 15 .. | 37 .. | 20 .. |

‘ The above includes two cases in which the face presented, and one shoulder presentation. I never met with a case requiring the use of the crotchet; and it may excite some surprise, when I state that I have no such instrument in my possession.’—(*From a paper by Mr. Ranken, in the Edinburgh Medical and Surgical Journal for April.*)

XV. *Benefit of the Climate of Madeira in Phthisis.*

‘ THE following table, limited as it is, will give a tolerably correct idea of what is to be expected, from a residence here, in lung cases. It is taken from those of which I happen to have memoranda, and which form a part of those which have been sent here during the course of the last eight years. It does not include the invalids who have come out this winter, many of whom will never see their native shores again.

‘ In the cases marked “ confirmed phthisis,” there were copious purulent expectoration, diarrhoea, &c., and almost all of them terminated fatally here. I examined the bodies of fifteen of them after death in the presence of some of my professional friends; and in every instance the lungs were found almost completely disorganised. The extent to which the process of disorganisation may proceed before death, is better exemplified here than in Britain, as the patient’s progress, *à son heure suprême*, is less liable to be hastened by accidental inflammatory attacks. In some of them the pulmonary symptoms were stated to be merely secondary, and the liver was denounced as the offender in chief; but in only one instance (that of a gentleman from Scotland, in whom that organ was found enormously enlarged, and of which there was sufficient evidence before death) was there found the slightest deviation from healthy structure in any of the other cavities. From this I exclude intestinal ulcerations, which are so generally met with whenever the disease has had an opportunity of running its victim completely down.

‘ Some of those marked “ incipient phthisis” were probably not fully entitled to an appellation so ominous. Their general character was young people who were said to have “ overgrown them-

selves," and who had been subject in England to inflammatory attacks, having cough, &c. Others had suffered from neglected or mistreated inflammation, and in many there was a strong family predisposition to pulmonary disease. Most of them, I have little doubt, would now have been in their graves but for the precautionary measure which was adopted.

| | | | | | |
|---|---|---|---|---|----------|
| Cases of Confirmed Phthisis | - | - | - | - | 47 |
| Of these there died here within six months after their arrival | - | - | - | - | 32 |
| went home in summer and returned and died, | - | - | - | - | 6 |
| left the island, but of whose death we have heard, | - | - | - | - | 6 |
| and not since heard of (probably dead) | - | - | - | - | 3 |
| Cases of Incipient Phthisis, | - | - | - | - | 35 |
| Of those there left the island, much improved in health, and of | - | - | - | - | |
| whom we have had good accounts, | - | - | - | - | 26 |
| also improved, but not since heard of, | - | - | - | - | 5 |
| and have since died, | - | - | - | - | 4 |
| Other diseases | - | - | - | - | 15 |
| | | | | | <hr/> 97 |

' From this it appears, that there are in England two sorts of cases in which transportation is recommended; those which are curable, and principally those which are not. Regarding the latter order, I shall merely observe that, in cases of the common tubercular phthisis, in which suppuration has commenced, a prolongation of existence, (and that under severe restrictions) is all that a residence here can be expected to afford. When it has proceeded to any considerable extent, I should consider it the duty of a medical attendant not only not to advise the adoption of such a measure, but most earnestly to dissuade from it those who, from hearsay evidence of the recovery of others in circumstances similar to their own, may feel disposed to fly to it as a last resource.

' That great and lasting benefit is to be derived from even a temporary residence in this climate, which is probably inferior to no other, in cases where pulmonary disease is merely threatened, or where strong family predisposition to it exists, many living examples sufficiently prove. But, even under such comparatively favourable circumstances, it ought to be strongly impressed on the mind of the invalid, that half measures are worse than useless; and that no advantage is to be derived from climate, however fine, unless it be steadily seconded by the utmost caution and prudence on his part.'

Madeira, 18th Nov. 1826.

(From a paper by Dr. Renton, in the *Edinburgh Medical and Surgical Journal* for April.)

XVI. *Directions for Using the Lunar Caustic.* By JOHN HIGGINBOTTOM, Esq.

' I AM desirous of giving a distinct account of the plan which I have learnt from experience to be the best, in applying the lunar caustic in those diseases in which I have hitherto employed it; for the *proper mode* of application of the caustic is quite essential to

secure its good effects, and to avoid some rather disagreeable consequences of a careless mode of using it.

‘ In the first place, I always prefer to use the lunar caustic in its solid form; for it is in that state much more manageable than in any other. It is necessary to moisten the surface to which it is applied slightly with pure water, except in the case of ulcers from which lymph or pus exudes, and then this is only necessary in regard to the surrounding skin.

‘ In the second place, it is essential to know the precise effects of the lunar caustic, in the different degrees of its application. If the caustic be passed once slightly over the moistened skin of any part, except the hand (upon which the cuticle is thicker than elsewhere), it induces an eschar simply; if it be passed over the surface twice or thrice, to the eschar will be added some vesication; if more frequently still, there will be vesication only. In the first case, there will be no pain; in the second and last, there will be soreness proportionate to the degree of vesication.

‘ It is essential to the success of this plan of treatment by the lunar caustic, that these observations be kept constantly in view.

‘ I shall now first describe the mode of application of the caustic in the treatment—

1. ‘ *Of Recent Bruised Wounds of the Skin, &c.*—In recent bruised wounds of the shin, the caustic should be applied upon the wound, taking care to leave no spot untouched, and upon the surrounding skin, to the breadth of one-third of an inch, in such a manner as to induce an eschar without vesications. Any moisture which may remain upon the wound is then to be removed, by gently applying a little linen or lint, and the skin surrounding that to which the caustic was applied is to be moistened, and covered with goldbeater’s skin, so that the whole may be protected from accident; the parts are then to be kept cool, free from covering, and exposed to the air.

‘ This is usually all the treatment which is required in this kind of injury. I have generally found that an adherent eschar is formed, and that no further application or attention is required, except in old people, in whom the skin is sometimes irritable from various causes: in this case a little fluid will form upon the edges of the eschar, and will require to be evacuated by a small puncture, as in the treatment of ulcers about to be described; the goldbeater’s skin being removed for this purpose, and then reapplied.

‘ If the eschar be removed by accident, at any time, the application of the caustic must be repeated as before. If due care be taken to avoid this kind of accident, I have not, in general, found it necessary to enjoin rest.

‘ 2. *Of Small Ulcers.*—I have stated, in my Essay on the Application of the Lunar Caustic, what were the cases in which I supposed it was proper to use this remedy. I have, since the date of that publication, improved much upon the mode of its application, and discovered many new instances of its utility.

‘ The treatment of ulcers by the caustic certainly requires more care and attention than some other cases; yet I have seldom found it necessary to attend daily to them for more than nine or ten days. It is of the greatest importance that the application of the caustic should be made with the utmost care; I shall, therefore, be very explicit in giving my directions for this purpose.

‘ The surrounding skin is first to be moistened, and the caustic applied lightly, so as not to induce vesication, to the extent of half an inch round the ulcer. It is then to be applied over the ulcerated surface; and it may be applied more freely upon this surface than in the case of a recent wound. The whole is then to be protected by goldbeater’s skin, in the manner already described.

‘ The application of the caustic round the ulcer subdues the inflammation of this part, and induces a firmer, and more continuous, and adherent eschar. If any detached vesication be induced, it is to be simply exposed to the air; but if it communicate with the surface of the ulcer, the fluid is to be carefully evacuated. A light dress, as wide trowsers, if the seat of the ulcer be upon the leg, is to be worn.

‘ On the succeeding day, the goldbeater’s skin is to be removed, by being moistened with a little water: a small smooth incision is to be made, by means of a penknife, through the eschar in its central part, and then a little pressure is to be made, so as to evacuate any fluid which may have been effused; this fluid is to be carefully removed by a little soft linen; the breach in the eschar is to be repaired by reapplying the caustic; and the whole is to be protected, as before, by the goldbeater’s skin.

‘ On the first and second days, there is usually little fluid secreted; for five or six succeeding days, rather more is formed. The same means must be employed for evacuating the fluid every day, until the eschar finally becomes completely adherent. This will be ascertained by the appearance of indentations in the surface of the eschar, and usually occurs about the tenth day. It is remarkable that in cases in which an eschar has been formed over a slough, it has required double the number of days to become adherent.

‘ During the unadherent state of the eschar, it is proper to administer an efficient purgative medicine every second or third day, and to enjoin rest. Afterwards, it is necessary carefully to remove the portions of the eschar as they separate at the edges, by means of a sharp pair of scissors, and to take great care to preserve it in its situation by the goldbeater’s skin, and from being detached by accident.

3. ‘ *Of Punctured Wounds and Bites.*—In recent punctured wounds, the orifice of the wound must be first examined: if there be any loose portion of skin closing the orifice of the wound, it is to be removed by a pair of sharp-pointed scissors, or by a lancet; the puncture and the surrounding skin are then to be moistened with a little water; the caustic is to be applied to the former until some pain be experienced, and over the latter lightly, so as not to induce

vesication. The caustic is then to be applied to the skin, for an inch round the puncture, and to a greater extent if the swelling exceeds this space. The part is then to be exposed to the air.

‘ These cases are generally adherent from the first application of the caustic, but I have sometimes found the eschar to separate from the wound before it has healed, owing to its conical form : it is then only necessary to repeat the application of the caustic slightly, to complete the cure.

‘ At a later period of punctured wounds, inflammation is usually present, the punctured orifice is nearly closed by the swelling, and a little pus has generally formed within. A slight pressure is to be applied to evacuate this fluid; the caustic is then to be applied within the puncture, and upon and a little beyond the surrounding inflamed skin, and the parts are to be exposed to dry. In this manner an adherent eschar is formed, and the inflammation subsides. If there be any vesication, it may be simply left to nature; the fluid is soon absorbed, or evaporates.

‘ If there be reason to suppose that an abscess has formed deeply, it must be opened freely by the lancet, and the caustic is then to be applied within the cavity; a poultice of bread and water, and cold water as a lotion, are then to be applied over the whole. The application of the caustic may be repeated every second or third day, if the swelling or inflammation require it; and the cold poultice may be renewed every eight hours.

‘ I have several times applied the caustic over an inflamed surface in cases in which I was not aware that suppuration had taken place. Even in these instances, an immediate check was given to the surrounding inflammation, and relief to the pain; but two or three days afterwards, there was an increase of swelling, attended by some pain, which is not usual, except when there is matter or some extraneous body underneath. In these cases I made a free incision with the lancet, and applied the caustic and cold poultice.

‘ 4. *Of External Inflammation.*—I have had many opportunities of trying the efficacy of the lunar caustic in the treatment of external inflammation, and have published some examples of this mode of cure in this Journal for May and June 1826.

‘ In this case it is best first to wash the part with soap and water, to remove any oily substance from the skin, and to wipe it dry; then to moisten the inflamed and surrounding skin, and to apply a long stick of caustic flat upon the moistened surfaces, taking care that not only every part of the inflamed skin be touched, but the surrounding healthy skin, to the extent of an inch, or more. The caustic must be passed over the surface twice or thrice only. The part is then to be exposed to the air to dry, and to be kept cool.

‘ In twenty-four hours, if the caustic has been properly applied, it will be observed that the inflammation has greatly subsided, and its progress been checked; but if there be one spot left untouched, the patient complains of it. Every such spot must be touched with the caustic. At this period there is usually a little vesication,

which, however, only does good, and never increases the inflammation, or induces irritation.

‘ On the third day, there is usually more vesication, and less swelling, and the patient complains of a little pain, as of that of a blister; but, on pressure, the part has a puffy feeling, and is quite free from inflammation.

‘ On the fourth day, the vesications are disappearing. It is best to leave them undisturbed, for the dried exudation defends the subjacent cutis.

‘ On the fifth day, the vesicated crusts separate, leaving the subjacent parts free from soreness or inflammation. It is sometimes several days before the whole of these crusts peel off; but I believe it is best to leave them undisturbed.

‘ In *erysipelas from wounds or ulcers*, the wound or ulcer, and the inflamed surface, are to be treated by combining these modes of using the caustic.

‘ In *inflammation of the absorbents*, the caustic is to be applied as in external inflammation, passing it along the course of the inflamed absorbents, and beyond the inflamed surface in every direction.

‘ *5. Of Constitutional Erysipelas.*—In this affection, bleeding, emetics, and purgative medicines, are to be premised, and then the lunar caustic is to be applied in the following manner:—The caustic is to be applied over the whole inflamed surface, and beyond it, upon the surrounding skin, to a far greater extent than in phlegmon,—perhaps to the extent of two inches or more round the inflamed border of the erysipelas. Any fresh accession of erysipelas must be immediately treated in the same manner. By means of the caustic, I believe it will often be found that we have a complete control over this disease. If the erysipelas be attended by vesication, the vesicles should be broken, and the part touched with the caustic; but if vesications arise from the use of the caustic, they may be allowed to remain undisturbed. When the erysipelas has affected the head, the scalp should be shaved, that there may be no impediment to the due application of the remedy.

‘ *6. Of Phagedenic Ulcers.*—In phagedenic ulcers, the caustic is to be lightly applied to the whole ulcer, but particularly to its edges and over the surrounding skin. If the ulcer be situated on the glans penis, a little lint is to be left upon it; if on any other part, the cold poultice and lotion are to be applied.

‘ *7. Of the Pain from applying the Lunar Caustic.*—I have never found the pain induced by the application of the caustic any barrier to its use. Patients generally suffer infinitely more from the inflammation, wound, or ulcer, treated in the ordinary way. The caustic gives a little pain at the time, but this is soon over. The ordinary mode of treatment is both more troublesome and painful, and for a much longer period. From the application of the caustic, in some painful circumstances, the patient expe-

riences early, if not immediate relief; and perhaps sleeps for the first time, after passing many restless nights.

‘ I have never observed the least bad consequences from the proper use of the caustic, though this, like all other remedies of great efficacy, requires to be employed with a due attention to such rules as experience teaches us to be best adapted to secure the objects which we have in view.’—(*London Medical and Physical Journal*, for April 1827.)

SECTION II.—INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. *On the Divisions at present existing in the Profession.*

WE cannot observe without extreme regret the unhappy dissensions existing in our profession, and the singular disposition which prevails in certain classes of it to lessen the influence of the rest. The surgeons are very clamorous for an equality of education in all classes of the profession, and seem to suppose their own education the standard by which that of all the other ranks should be arranged. With men who seem to write and speak on this subject under the influence of feelings known only to themselves, it would be idle to attempt to reason: but it is very evident, first, that an equality of education on the part of all who devote themselves to the medical profession is impossible; and, secondly, that if it *were* possible, some better standard of acquirement must be sought than that afforded by the general education of a surgeon.

Another unhappy schism seems to have arisen between the *pure* physicians and *pure* surgeons (we use the word for want of any other distinctive appellation), and those who practise midwifery. The physicians disdain, or affect to disdain, the anxious duties of the accoucheur; and even the surgeons cry out against men-midwives. We profess to be utterly confounded by the criminatory papers we have of late years seen on this subject; and to be lost in astonishment when we find men of sense, and not destitute of some knowledge of the world, imagining that the business of the accoucheur could possibly be transferred to the female sex. We shall not bring forward all that might be said on this subject; but we think there is an insuperable objection to such a singular revolution in practice, in the impossibility of women ever acquiring so much exact medical knowledge as would enable them to practise in all midwifery cases with *safety*. Until this argument is answered, we might, we think, very composedly listen to all that is advanced on the opposite side of the question.

But when we see this topic discussed in such a manner as very powerfully to engage the feelings in it, and the feelings of the public; when we see a convenient, or at least a customary, division of practice not merely objected to as a monopoly, but reprobated as the occasion of immorality, we cannot help devoting a little more space

to the question. The idea of monopoly, indeed, when any man might share in the advantages of the asserted monopoly who chose to do so, was most absurd: but we are told our women are *demoralised* by the confidence they place in male accoucheurs. Surely the *husbands* of England are not to be persuaded of this! Surely the *sons* and *brothers* of English women will not give credit to so monstrous a fantasy!

The agitation of this question can but create mistrust and unhappy feelings: good effect it can have none. Women cannot live in health without the occasional attendance of men as their medical advisers. Children cannot be brought safely into the world, in many cases, without the skilful assistance of accoucheurs who have acquired more knowledge than women ever could acquire. If it were even possible to transfer the mere assistance during labour to female practitioners, every woman would still be under the necessity, and that very frequently, of conversing with her medical adviser concerning circumstances connected with her general health, which she could not confide to any other man; and thus the peculiar opportunities, of which so much has been said, would still be afforded to medical men of gaining the confidence of their female patients. The diseases peculiar to women are of great extent and importance, and could never be treated by female practitioners. The functions of the uterus are disturbed in many disorders of the constitution; and if men are not to be trusted to inquire about them, if medical men are to be supposed so gross, so abandoned, so lost to all honourable, to all manly feelings, as to presume on the necessary confidence their female patients repose in them for the purpose of deluding and seducing them, then we must have female physicians and surgeons as well as midwives.

We really do not think that the state of morals in our profession justifies such horrible suspicions. Bad men there must be among physicians and surgeons; but if the immoralities really existed which are by some supposed to be practised in consequence of male attendance on women in labour, we think we should hear a little more of it in the world than we do. We speak with some knowledge and observation of the profession, when we say, that, considering the great opportunities afforded to medical men, we really think it a proud thing to reflect, that so few instances should occur in which these opportunities are abused. Even the youngest practitioners, whatever other faults they may give way to, are signally prudent in the restriction of their desire for the sex.

Further, we neither believe that the minds of women are depraved by their conversations with their medical men, nor that the business of an accoucheur at all disposes him beyond other practitioners to licentious practices. Without affecting any superiority of virtue over other men, and admitting all the seductions of beauty, and all the dangers of opportunity, we say, *we do not believe* that the accoucheurs of this country are at all characterised by immoral practices; and *if they are not*, all the laboured argument which has been applied to prove the tendency of their line of practice falls to

the ground. It is childish to talk of privacy, and concealment, and criminal practices uncommunicated, in cases of this kind. Such things are, in truth, seldom long concealed; and for this reason, we find, in any given circle of medical practitioners, one or two effectually marked from the rest, and pointed out as *exceptions*, on account of known derelictions from chaste conduct. Trusting to our memory on this subject, we should say, that of all the instances of impropriety into which medical men have been betrayed with regard to their female patients, we believe a very small proportion have arisen out of circumstances connected with the practice of an accoucheur. The mind must indeed be debased which could admit ideas of sensual enjoyment when attending a woman in the latest stage of pregnancy, or through the many dangers of the puerperal state. If any man were brutal enough to try to avail himself of times like these to corrupt the minds of his patients, the common delicacy of the lowest of the sex would rise against him; and such a wretch must have been originally too polluted in his nature to allow our ascribing his sensuality to his profession.

We cannot think without great concern of the abominable suspicions thrown abroad among innocent women concerning those to whom they naturally look for comfort and help in their greatest trials. Those who have so vehemently attacked the whole body of accoucheurs have doubtless been led too far by the knowledge they happen to possess of some infamous practices on the part of individuals; but if any good end is to be answered by animadverting on the subject at all, let such individuals and their malpractices be boldly denounced by name; let them be held up to the scorn of the profession; let them be cast out from among men of honour and virtue. And if those who know the facts dare not utter them, then let them for ever hold their peace. Least of all, let them wound the feelings of all honest practitioners in midwifery, and refrain from introducing dreadful imaginations into minds the purity of which it is cruel and unjustifiable to invade.

The writer of these hastily composed remarks does not practise midwifery, and he therefore imagines he is speaking what all good men in the profession feel, when he says that he views the unmeasured slanders which have been directed against the accoucheurs, against their habits, their conversation, their domestic lives, with *abhorrence*. If the libellous pages to which we allude have really found their way into ladies' dressing-rooms, which some suppose they have, we think we know some among those engaged in the much-vilified department of practice who are perfectly competent to shew their absurdity, their gross indelicacy, and their most foul and ill-judged exaggerations.

II. *Memoir of the late Dr. Walker, of Richmond.*

WE have much pleasure in giving insertion to the annexed memoir, for which our thanks are due to a physician not undistinguished in medical literature. The unaffected sorrow evinced in his account of his deceased friend, whilst it is highly honourable to the object

of that sacred feeling, is no less so to the heart of his kind biographer.

There is something in the nature of the duties performed by medical men which of itself is distinction, which raises them above the common rank, and assigns them, as matter of right, or at least of well-earned privilege, a character both interesting and remarkable. Nor do we conceive it essential that the individual in whom this is acknowledged should have spent a long life in the exercise of his profession: for when one, however distinguished, comes down to the grave, like a shock of corn, in his full season, our regret may be profound, but the event must be regarded as an ordinary one; but when the young and the promising are cut off, our sorrow is aggravated by disappointment. Such has been the case with regard to one who bade as fair to be an ornament to our profession, and a blessing to society, as any example it has ever been in our power to select.

Died at Edinburgh, lately, Dr. William Mutter Walker, who was born in that city in the year 1797. His education, upon the most liberal scale that the northern metropolis affords, was wholly received there. Having been well grounded in classical and elementary knowledge at the High School, he pursued his studies afterwards in the University, where, while possessing the advantage of the private instruction of one of the most respectable practitioners, he was the pupil of all those men who have contributed to raise the medical school of Edinburgh to such renown. Among those destined for the medical profession, whose home is at or near the seat of instruction, it is a common practice to become the particular pupils of members of the Royal College of Surgeons; and Mr. Walker, in conformity to this practice, was articulated to Mr. Henry Johnston. Whatever may be the state of opinion as to medical apprenticeships in this country, we know that in Edinburgh they give the student opportunities of improvement, which, by a mere attendance on the public schools, are not to be enjoyed. We are well persuaded, that in the instance before us the advantages of this system were most satisfactorily displayed.

At the early age of nineteen, Walker obtained a distinction which falls to the share of few, and which is conclusive evidence of superior attainments, as well as propriety of conduct and elegant manners: he was elected a President of the Royal Medical Society, a compliment that is never paid to any but those whom the numerous body of students, and others belonging to the institution, are disposed to consider a model for imitation. Before he had quite finished his studies, he repaired to Germany, and following the Russian army on their first advance to Paris, was present at the battle of Leipzig. After this he returned to Edinburgh, and was admitted to the degree of M.D. He then came to London, and was soon afterwards selected as the professional adviser of a lady of high rank, whom he accompanied to the continent. Upon this and other occasions Dr. Walker had opportunities of visiting the most celebrated cities of Italy, France, and Germany; and no man could

make a better use than he did of these opportunities. In gratifying his naturally fine and highly cultivated taste, he stored his mind with impressions and recollections that afterwards made his society a treat which those who enjoyed it will never be able to forget.

The friends, too, he at the same time made were of the most powerful and respectable description: he was, on all occasions, acceptable to the good, sought for by the accomplished, and welcomed by the great. The influence he possessed in the highest quarters was truly astonishing, and the use he made of it was of itself evidence of no ordinary excellence of character. He was ever ready to exert himself in behalf of those he knew; and seldom indeed were his exertions vain. To be of use to those about him was his delight; and to perform substantial acts of kindness, his occupation. As his younger brothers grew up, he procured for them appointments of the most eligible description, and these were awarded him solely on the score of his own personal merit; for political influence, or connexion, he had none. We do not believe (with all his knowledge of the world) that he was capable of intriguing; all his proceedings were straightforward, founded upon an accurate knowledge of propriety, and guided by the best of principles.

We always looked upon him as a model of *professional* excellence; and the terms on which he lived with many who have reached the highest distinction in this path, give countenance to the opinion. The late Dr. Baillie, and many still living, might be named, as being at all times, and on all occasions, literally *glad* to see him. One of the first offers made to him on leaving Edinburgh, was to proceed as a public professor to St. Domingo, under the immediate auspices and protection of the late chief of that government. For some time, he actually held this appointment, and even had the recommendation of his colleagues in the projected seminary. To this station he did not repair; and although it is perhaps incumbent on us to avow that he disclaimed all views of a *missionary* nature, this candid explanation was in no way unfavourable to his prospects in that quarter. The eminent individual to whom the management of the business was confided, did not think the worse of him on this account, and continued his regard ever afterwards. The writer had the melancholy task of announcing to this gentleman the death of their friend, and the gratification of finding that to the last he possessed the good opinion of one with whom all rightly disposed persons would wish to stand well.

In 1821 Dr. Walker took up his abode at Richmond, with the view of settling there as a physician: and it would have been difficult to have selected from the medical ranks one better qualified, in every respect, to maintain their reputation in the eyes of the elegant and scrutinising society with which he there associated. In addition to the more solid pretensions already noticed, Dr. Walker possessed a remarkably agreeable person, and an elegant demeanour, as well as dignity of manner, not often met with,

and probably never surpassed. At his outset, some attempts (not very creditable to the parties with whom they originated) were made to prevent his sharing the public confidence; but these his correct conduct, his superior qualifications, and in particular a uniform system of forbearance and calmness, enabled him quickly to triumph over. He had completely obviated all these unworthy demonstrations of jealousy, and was already beyond the influence of illiberal misrepresentation, when it pleased God to afflict him with a fatal disorder, under which (after much and protracted suffering for the space of nearly two years) he ultimately sunk. He yielded his last breath in the house of his respectable father, who, with many others, survives to deplore an irreparable loss.

There was a retiring disposition about our friend, which sometimes excited unjust impressions on the part of those who but imperfectly knew him, and probably led to greater privacy of character than is usual with men of superior attainments. What he might have done for the improvement of professional knowledge, had his life been protracted, we do not pretend to say; but that he must have been placed in some influential situation, we have no hesitation in affirming. We knew him thoroughly. The hand that traces this imperfect account, and which has often grasped that of a matchless friend, bade fair, for a long period, to be first laid in the tomb; but the Author and Giver of life has been pleased to reverse the order of precedence. Restored to health and to society, its owner finds a sad void in the circle round which he was accustomed to look with satisfaction, when the counsel and sympathy of his departed associate were at command. And were he assured that the sun which now shines upon this melancholy occupation would shed its parting ray upon his death bed, it would be difficult to select a more acceptable occupation for the last hours of his own existence than recording the worth of William Walker.

III. *Decline and Fall of the White Mustard-Seed.*

IN the *eleventh* Number of the present Series of the *REPOSITORY* (for May 1826), we devoted a few pages to a consideration of the *Revival of the Use of Mustard-Seed*. All that time this celebrated medicine was in the highest degree fashionable; and we ventured to expose the absurdity (to say no worse of them) of some of those most active in its praise. We presumed to doubt its possessing much medicinal power, and were particularly sceptical regarding the propriety of its universal application. Such an unwillingness to follow, where the wealthy part of the public were so willingly led, did not at that moment savour of prudence, and wiser practitioners were either content to suppose it 'possible' the mustard-seed might be 'very efficacious in some cases;' or went so far as to sanction the quackery of the day by their authority. The guardians of the medical public, the editors of medical journals, somewhat too cautiously, we think, forebore to confront the falsehoods daily uttered and written on the subject. Country gentlemen returned from town with boxes of mustard-seed, the contents of which they

not only partook very largely of themselves, but compelled the luckless poor of their villages to partake of also. Country clergymen, and 'heads of families,' hastened to purchase an immunity from all disorders that could assail respectable persons of all ages; and many country apothecaries rejoiced greatly over the discovery of a medicine more potent to 'carry off the bile' than the calomel and blue pill, to which they had previously trusted. This was all very gratifying.

A single year has scarcely elapsed, and the same mustard-seed, which was held up as a cure for phthisis and epilepsy;—the very medicine which Mr. Cooke, of Cheltenham, declared was 'one of the greatest blessings that had ever been dispensed for suffering man';—a medicine which might be taken at any time without disgust; and which promised to be beneficial, above all other medicines, in gout, rheumatism, asthma, dropsy, paralysis, paraplegia, tic douloureux, &c. &c. &c., in short, in all the diseases by which any of the invalids resorting to Cheltenham might be afflicted:—is now reviled in pamphlets, ridiculed in essays, openly discountenanced in reviews, and hardly ever inquired for in the shops.

In this rise and fall of a medicine which had very active eulogists in its day of prosperity, there is nothing very remarkable; for we believe our seniors in the profession can remember several analogous examples of public credulity, and professional subserviency, followed by desertion on the part of medical men, and ingratitude on the part of patients.

But it is yet very mortifying to those who wish to think they are not engaged in a conjectural science, and who desire to practise physic honourably, to find the wealthy part of society, and the practitioners of medicine, so grossly ignorant, and so open to folly and fraud in matters which concern health. We say the wealthy part of society, for we believe the late delusion never passed to the poorer classes; and we think we see in this a justification of an opinion we have before expressed, that quackery is more common among the educated than the uneducated classes of the community; and that medical men, from their habitual submission to the caprice which they find profitable, and their deficient education, possess very little influence with the better-informed part of their patients.

In the instance of the mustard-seed, the delusion which has existed is wholly inexplicable. We do not now speak of the contemptible silliness of 'domestic medicine;' but of the singular fact, that any persons calling themselves medical practitioners should have been so wholly inobservant of effects, as to advocate a medicine which is now described, by persons who have been foolish enough to try it in their own persons, as productive of no good effects, and of some highly disagreeable ones. Before these statements were made, we imagined that the medicine might possibly, by stimulating the stomach and intestines, produce such agreeable sensations as were construed into the feelings of health. We were assured, that the mustard-seed at least acted as a purgative, and increased the secretion of bile. But we are now told, that it

distends and oppresses the stomach, irritates the bowels, has little or no operation as a purgative, and is productive of such a wonderful discharge of sulphuretted hydrogen gas, as renders the patient loathsome to himself and every body near him.

Dr. James Johnson, in the second edition of his *Essay on Morbid Sensibility of the Stomach and Bowels*, alludes to these representations, and seems to think them correct. We should be glad to know what Mr. Cooke, of Cheltenham, and his philanthropic friend, John Turnor, Esq., of Stoke Rochford, near Grantham, say to these things. It is really to be regretted, that there are no means of holding up for the perpetual instruction of the profession a list of the various medicines which have from time to time been alternately extolled and abandoned; and at the same time of exposing, for the advantage of all future practitioners, the names of those who were ignorant or unprincipled enough to aid in procuring an ephemeral fame for medicines either inert or absolutely noxious. The recent illustration of the white mustard-seed, the celebrity of which has been so transient, will, we hope, act as a prevention, for some time to come, of any attempt to get fame or money by the arts for which it has afforded such well-cultivated opportunities.

IV. *Mr. Daglish's Report on Vaccinia, &c.*

WE give insertion to the following extract from Mr. Daglish's Report, in the hope that some of the remarks contained in it may be more extensively useful than they can be in the original form, in which they were intended for local circulation. As far as our opportunities of observation extend, we still see great reason to lament the general neglect of vaccination. Some of the older practitioners in the country prognosticate the appearance of small-pox in a severe form, after the disappearance of the hooping-cough and measles, which now prevail very widely, and the latter in many cases very severely. In case their prediction should be verified, we know very large districts in which the disorder will rage amongst children neither protected by vaccination nor by previous inoculation. The following are the observations of Mr. Daglish.

'Early in the year 1800 the practice of vaccination was commenced in Newcastle, and underwent the closest scrutiny by several of the most respectable surgeons of that day.

'The value of vaccination was no sooner admitted by the public in general, than institutions for its promotion, some of which were under royal patronage, were numerous throughout the kingdom; and in 1801 an efficient and well-regulated establishment was connected with the Dispensary in this town. This branch of that excellent charity has been eminently successful; and, agreeable to the last Report, the large number of seventeen thousand eight hundred and seventy-seven children has been vaccinated, not one of whom died when under the vaccine disease. The medical gentlemen in the town adopted vaccination into their private practice, as the then existing prejudices were removed.

* The writer ventured in 1825 to place before the public "*Observations*," &c. on Vaccination, also containing his *first* Report on that practice; for the correctness of which he has received, and has in his possession, the approving testimonials of physicians, surgeons, clergymen, magistrates, and others in Newcastle, wherein is contained statements which bear directly on the subject. He refers to that work for additional information. He may, however, be permitted to remark, that since the treatise alluded to was written, not one case or circumstance has come within his knowledge which has had the least tendency to weaken his confidence in the preventive powers of the cow-pock against small-pox contagion, or to alter his opinion on any one principle which is there advanced.

* The writer feels himself called upon to combat the generally-received opinion, that the autumn, the spring, and the winter months, are the most proper for the performance of vaccination. This is not the case. Summer, or when Fahrenheit's thermometer stands from 60° to 65°, appears the most favourable time for the progress and proper termination of the vaccine disease. A warm temperature is generally supposed to increase the action or energy of the human system; and it is desirable, during vaccination, that the system should be excited, in order that the *constitution* may, to a greater certainty, be affected. In such cases, the vaccine pustules are generally larger and better formed, contain a much greater quantity of lymph, and appear in every respect more characteristic. On the contrary, in winter, or when the thermometer stands at freezing, a species of procrastination is evident in the progress of vaccination, and the pustules are almost invariably small and unsatisfactory.

* The most useful aperient for children when under vaccination, should the state of the bowels require it, is, in the writer's opinion, composed of pulvis jalapæ *three parts*, and pulvis ipecacuanhæ *one part*, mixed and given in doses suited to the age and strength of the patient. Mercury in all its preparations ought to be most carefully avoided. Commonly cathartics are not necessary to be given after vaccination; but as there are various opinions on this subject amongst medical men, few, however, if any, considering them injurious when given in a mild form, and without mercury; and as in the lower classes of society in particular, a decided desire exists for giving physic after eruptive diseases, it appears the preferable way to give some gentle aperient, in order to meet the prejudices of the latter, as far as the safety of the patient will admit, and to prevent them administering improper medicines. The writer is unwilling to hazard an opinion on the above question; at the same time, he is anxious that every prudent means should be used to encourage a proper confidence in vaccination; he is not aware, from his own experience, that evil consequences have ever arisen from the use of mild purgatives given during the latter stages of the vaccine disease, but is rather inclined to believe that in certain cases they have had a beneficial tendency; indeed he

thinks that in general too little attention is given to the state of the health both before and after vaccination, especially in the former; in several instances he has observed that where a child who had resisted vaccination without any apparent cause, was afterwards gently purged for two or three successive days, and the operation repeated, the cow-pock disease has gone through its course in the most regular manner. From these facts, he concludes that in cases where vaccination has either not succeeded, or been slow in its progress, the system has needed rousing to enable it to receive properly the vaccine virus, which purgatives, by increasing the action of the absorbent system, are very likely to effect. It is, therefore, recommended in cases where it is practicable, that the patient should, a week or two previously to being vaccinated, undergo a course of about three days of gentle purging; and certainly it is not too much to require this attention, especially when it is remembered, that previous to the introduction of vaccination, and when the small-pox inoculation was the general practice, the utmost care was taken to prepare the body for the reception of the latter disease; on such occasions it was common to order the patient who had to undergo small-pox inoculation, to a country lodging for two or three weeks previously, and at the same time to place him under the most strict regimen, allowing no milk, butter, &c., and administering, amongst other celebrated medicines of the day, Baron Dimsdale's Mercurial Powder, which was supposed to be composed of creta præparata, hydrargyrum, and antimonium tartarizatum. If all this appeared necessary for small-pox, why should not some little care be given to cow-pock inoculation? Surely the latter is in every respect more worthy of regard. These hints serve to strengthen what has already been advanced under the head of temperature.

‘ In cases where, from not affording sufficient protection from the cold or injuries, inflammation in the arms is induced, requiring cataplasms or other soothing applications, or where all the vaccine vesicles are broken, from friction or any other cause, it appears highly necessary to repeat the vaccination in a few weeks afterwards, in order to secure to the system the beneficial effects of that remedy. Saturnine or other cooling lotions, so strongly recommended by various authors, have, the writer thinks, a very injurious tendency.

‘ In reference to the statement which has frequently been made in the public journals, and other mediums of information, that vaccination was, in addition to its other valuable properties, a cure (not a preventive) for the whooping cough, the writer can only notice, that he has observed in several instances, where children have been vaccinated when labouring under whooping cough, that the latter harassing disease has been greatly mitigated, and in a few cases it left altogether; whether this relief arises from the vaccination, or was owing to some other cause, he does not attempt to determine; at the same time, it certainly appears imprudent to endeavour to lessen the violence of one disease at the risk of

counteracting the beneficial effects which another, of much more importance, is intended to produce.

‘ Since the writer published his “ Observations,” &c., in March 1825, as before alluded to, he has vaccinated *two thousand five hundred and forty-seven* children and adults, who have, with very few exceptions, arising almost exclusively from the carelessness of the parents, passed through the disease in a satisfactory manner. In the same period he has supplied the surgeons in this town, and surrounding counties of Durham, Northumberland, Yorkshire, Westmoreland, and Cumberland, also in Berwick-upon-Tweed, and Scotland, with *one thousand four hundred and thirty-one* packets of fresh vaccine lymph, taken invariably on the eighth day of vaccination, from the arms of healthy and robust children; making a total, which the writer has vaccinated since his commencement of the practice, of *seven thousand one hundred and seventy-nine* children and adults vaccinated, and *four thousand six hundred and ninety-seven* packets of matter supplied to surgeons: and also, in numerous instances, he has either given surgeons, applying for virus, the residence of the parents of a child under vaccination, in order that they might visit them personally, and supply themselves with fluid, or directed the mother to carry her infant to the dwellings of various respectable persons in Newcastle, where the family surgeon has attended and vaccinated the children belonging to each family from the child he had previously requested to be brought for that purpose.

‘ The writer believes there are thirty-one or two surgeons practising in Newcastle and Gateshead, and out of this number thirty were supplied with fresh vaccine lymph during the past year, and some of them received to the quantity of *forty-two* packets in that period! This fact is a proof that they approve of the method pursued by the writer, in reference to vaccination, and that they consider the vaccine fluid with which he supplies them to be genuine: thus impressed, he feels encouraged to persevere in his endeavours to promote the practice of vaccination, and thereby hopes to be in some degree instrumental in counteracting the destructive and deadly effects of the variolous infection.’

V. *National Vaccine Establishment.*

ANNUAL REPORT OF THE NATIONAL VACCINE BOARD TO THE SECRETARY OF STATE FOR THE HOME DEPARTMENT; DATED 17TH FEBRUARY, 1827.

To the Right Honourable Robert Peel, Secretary of State for the Home Department.

SIR,—We continue to use all possible diligence in extending the knowledge of the best process for effectual vaccination, and to supply the means, as well as to suggest the mode, of accomplishing this object.

From the quantity of vaccine lymph distributed since our last report, and from the accounts of our correspondents, we are led to

presume that this practice is becoming daily more general; and this inference is still further confirmed by the fact, that within the last twelve months only five hundred and three deaths have occurred from small-pox within the bills of mortality; whereas, in the preceding year, twelve hundred and ninety-nine persons are recorded as having fallen victims to that loathsome disease. The whole of this difference ought not, perhaps, in candour, to be attributed to the influence of vaccination; for the small-pox, during the year one thousand eight hundred and twenty-five, assumed a peculiarly malignant character; and there were more instances of that distemper occurring *twice* in the same individual, than had ever been reported to us before. But when we reflect, that, before the introduction of vaccination, the average number of deaths from small-pox, within the bills of mortality, was annually about four thousand, no stronger argument can reasonably be demanded in favour of the value of this important discovery. Nor can any more striking proof be given of the paternal care of government, to protect the people at home and abroad from this destructive disease, than the establishment and maintenance of this Board.

We have the honour to be, Sir, your faithful servants,

HENRY HALFORD,

President of the Royal College of Physicians.

WM. LAMBE, } Censors of the Royal College
J. COPE, } of Physicians.

JOHN ABERNETHY,

President of the Royal College of Surgeons.

ASTLEY COOPER,

Vice-President of the Royal College of Surgeons.

CLEMENT HUE, M.D., Registrar.

National Vaccine Establishment, 17th February, 1827.

VI. *Homœopathia, or the Art of Curing founded on Resemblances.*

It is not without some allowable degree of pride that the students of the British schools of medicine may look abroad into the occupations of the members of our profession in some other countries. The French are quarrelling most bitterly concerning the constant existence of what are called irritations, or those of them who are in better humour are pursuing the visions of animal magnetism. The Italians have not yet quite made up their minds concerning the infallibility of the system of John Brown. The Germans are occupied in matters of higher importance, in nursing with all the care and industry which belongs to their character, the two very useful sciences of *animal magnetism* and *homœopathia*. In this country we do not pursue these matters very far; believing for the most part that ingenuity and philosophy are very good things, but that a little good sense is a very useful quality also.

We have on former occasions laid before our readers perhaps even more particulars than they read concerning Broussais and his disciples, and concerning the resurrection of magnetism. The

science of homœopathia was, we think, merely incidentally alluded to, some time ago, in connexion with the asserted power of belladonna to prevent scarlatina by its property of producing a state something like it. If the reader, therefore, has nothing useful to do for a quarter of an hour, and feels interested in watching the imaginative excursions of physicians out of the ordinary paths of practice, a short explanation of this famous subject may be worth his perusal.

The term homœopathia is derived, we believe, from *ipsoe ratione*, a similar affection, and the system, which it is intended to convey an idea of, has risen up within the last twenty years; at least so we learn from the foreign journals, although it seems to us to be a kind of revival of old fancies, or the celebrated doctrine of signatures in a new shape. The great principle of it is, *similia similibus curantur*: and to obtain a complete cure, it is only necessary to select some article of the materia medica which possesses the property of producing an artificial malady, with as close a resemblance as possible to that which you wish to remove. Two diseases, say the founders of this doctrine, cannot exist together; and the medicamental disease being stronger than the natural disease, ejects it altogether from the body. And if it is suggested, that the human body in that case has only got rid of a weak disorder by admitting a stronger, has been put out of fear of an enemy by letting in a master, we are told that the medicamental malady always cures itself. A few exceptions to the above doctrines seem to be admitted, however, such as small-pox, syphilis, scabies, and the plague; which, with some others, are allowed to be too much for the medicamental malady. But in other cases, the medicamental virtue is so absolute, that the smallest possible dose is sufficient to dislodge the disease. And as it immediately, of course, produces a change in the condition of the human body, the same medicine is never to be given twice. If the patient begins to mend, you must give nothing; if he is getting worse, the medicament was not well chosen: you may be inclined to suppose that it might do better in a larger dose, but that is not allowed. If the patient is neither better nor worse for the medicine, the conclusion is, not that you have given *too little* of it, but *too much*. Thus the ordinary doses of the homœopathic physicians is about the *millionth* part of a grain, or not quite so much. Decoctions, infusions, and extracts, seem to be very little employed by them, but only powders and tinctures. They are very severe in the articles of diet and regimen, a severity to which all systems of quackery are more or less indebted. The reader is not to suppose we have no cases to present to him. A brazier's apprentice was troubled with a quartan fever for three months, which did not yield to strong doses of *kina*. He came under the care of an homœopathic: a drop of the tincture of bark was given him, and even repeated, but without success: and his physician remarking that he had a troublesome cough which prevented his sleeping, had recourse to the hyoscyamus, and gave him the *millionth part of a grain*: the cough and the fever disap-

peared together. An emaciated, feeble woman, was suddenly attacked with hæmorrhage from the nose, the lungs, and the stomach: cinchona, canella, chalybeates, applications of vinegar, were tried in vain; and the patient was left to her fate: an homœopathic physician very providentially saw her, the hæmorrhage still continuing, and the patient cold and almost insensible: a *billionth* of the powder of chamomile was given *without delay*, and the hæmorrhage ceased in an instant: the patient slept remarkably well, but felt a little low the next morning: a new attack of epistaxis came on; the condition of the body was of course changed; the powder of chamomile no longer proper,—but a *billionth* of a grain of *saffron* was given, and in a quarter of an hour all was well. The same patient was attacked with the ague a few days afterwards, and the same enlightened physician, who had conducted her safely through her former difficulties, now tied a *leaf* of the *Flammula Jovis* to her little finger, which produced a little blister, and the fever was cast out in the most summary manner. The *Flammula Jovis* is, it seems, very commonly employed in this manner, and might surely lead to the saving of a great deal of bark in the fens of Lincoln and Cambridge. One more case:—a robust man, of thirty-eight, affected for *six years* with gonorrhœa, which had been vainly treated by various practitioners according to the common methods, placed himself under the care of an homœopathic physician: the discharge was yellowish and copious; there were often painful erections, but there was no pain in making water: sometimes there was much pruritis at the extremity of the glans. The physician, *having remarked* that *analogous* symptoms were produced by the fresh juice of *parsley*, caused the patient to take, in the morning, *one drop* of this juice in spirits, mixed with half an ounce of water, enjoining strict abstinence, and desiring that no other medicine should be given. The next day the discharge was greater,—this merely shewed the combat going on between the natural and medicamental disease: and, although not strictly, as it appears to us, in conformity to the principles of homœopathia, the same medicine was given, in the same dose, the second day; and on the third day the patient was well. We have no more cases before us at present; but the list of diseases to which the new, or, as we think, it may not unaptly be called, the *Lilliputian* system of medicine has been successfully applied, would take up a page of our journal. We observe among them phthisis, acute rheumatism, madness, and *sterility*.

It is quite unnecessary for us to point out the great importance of the new system as regards the practice of physic in general, or its vital importance as regards the Apothecaries' Company in particular. The fullest exposition of it seems to be contained in a work by Dr. Boeckel, published recently at Strasbourg. Several other publications on the same subject are mentioned in the *Bulletin des Sciences Médicales* for January last.

VII. *On the Chemical Process performed in Respiration.*

THE opinion sustained by Allen and Pepys, and by others, that the blood does not receive oxygen from the air, but that on the contrary the oxygen serves only to form carbonic acid which is respired, is combated by Professor Mayer, of Bonn. He has several times repeated an experiment by which he proves, that the walls of the pulmonary vessels are really permeable to oxygen; and that this gas combines itself with the blood. The experiment consists in killing an animal by strangulation, immediately opening the thorax and pericardium, dividing the aorta and the pulmonary artery, and injecting distilled water into the latter until all the blood of the lungs is drawn off, and the water returns quite clear through the portion of the aorta yet attached to the heart. This preparation being made, a green solution of *cameleon mineral*, which has been carefully kept from the air, is injected into the pulmonary artery: it returns by the aorta, yet retaining the same colour; but if the aorta is tied, and a fresh portion of the same solution is injected, and then the pulmonary artery tied, and air blown into the lungs, and artificial respiration kept up for some minutes, the liquid injected into the pulmonary vessels will soon acquire a beautiful red colour: a proof that the oxygen of the air has acted on the *cameleon mineral* by penetrating the organic walls of the vessels which contained it.

(The *cameleon mineral* employed in the above experiment is a combination of the peroxide of manganese with potash or soda, effected by the absorption of a portion of oxygen: it is either a manganesiate of potash, or a compound of peroxide of manganese and potassium, according to that of the two oxides with which the excess of oxygen unites itself, which is not yet ascertained. Its name is derived from the changes of colour it undergoes when its solution is treated with acids or with alcalies.—*Dict. des Termes de Médecine*, &c. par Begin, &c.)

VIII. *Suicides in the Prussian States.*

OF five hundred suicides which took place in the city of Berlin in the space of the last six years and a half, fourteen had their origin in offended honour; sixty-one in mental alienation; fifty-four in drunkenness and dissipation; thirty-two in the fear of punishment; eighteen in debts and domestic trouble; twelve were caused by love; eleven by quarrels between married people; three arose from simple disgust with life; twelve from pain and disease; one from religious excitement; and two hundred and eighty-two from unknown causes. As regards the different modes in which the suicides took their leave of life, out of five hundred and thirty-five individuals, two hundred and thirty-four chose the rope; one hundred and sixty-three preferred a pistol; sixty drowned themselves; seventeen cut their throats; twenty killed themselves by swords or stabbing instruments; nineteen threw themselves out of win-

dows; ten died of poison; and two produced death by opening an artery.

Professor Casper, who has given these details, does not seem to have specified the number of suicides in each sex. It is remarkable, that out of so many persons who destroyed themselves only one should have been led to the act by religious excitement. That thirty-two should have killed themselves from fear of impending punishment either argues a dreadful system of discipline in Prussia, or a certain fashion in the prisoners. Hanging seems to have as decided a preference among the Prussian suicides as it is supposed to have in England. The French prefer the notoriety of throwing themselves off a house, or what is still more striking, off a column or monument. The neglect of the premonitory symptoms of a disposition to suicide are, we think, most singularly neglected in all countries.

IX. *Œsophagus communicating with the Trachea.*

A NEWLY-BORN infant rejected every kind of drink, and died in thirty-six hours. When the body was opened, and the stomach exposed, it was found impossible to inflate it by means of a tube introduced into the pharynx: the tube was then inserted into the trachea, and the air blown through it inflated both the stomach and the lungs. The *œsophagus* was then sought, but instead of it there was merely a *cul-de-sac* of some lines in length: a stilet was introduced into the trachea, and between the two ramifications it passed into a membranous elastic opening, about as large as a small quill, and went on towards the stomach.—(*Bull. des Sc. Méd., from the Observ. des Sc. Méd. of Marseilles.*)

X. *Spontaneous Rupture of the Vena Cava Abdominalis.*

MADAME FÉLICITÉ H., aged thirty, of a nervous temperament, had once or twice suffered from nervous agitation in consequence of some affliction. Two months after the first occurrence of these circumstances, and quite suddenly, she was seized with acute pain in the lower part of the abdomen: the pain was so severe that it was necessary to assist her to a couch. M. Larrey arrived half an hour afterwards. The pain had ceased, the pulse was natural, but the patient entertained the most mournful apprehensions. At seven in the evening, M. Larrey found her in bed without any pulse; a cold and clammy perspiration was on the skin; the intellectual faculties were undisturbed. The patient said she was dying. Ammoniated sinapisms were applied to the thighs, and an antispasmodic draught given. At nine o'clock the pulse was just perceived, the umbilical region was painful, but not tympanitic: a bath was ordered, which produced great relief; the pulse recovered its strength and frequency; but the patient having taken half a glass of wine and water in consequence of extreme thirst, such a state of faintness followed that she was supposed to be dead. A little afterwards the pulse was again felt, but was very feeble: sinapisms

were again applied to the legs. From that time until half-past three in the morning there was no change; icy coldness of the extremities; head free from pain; respiration natural; abdomen soft, and very little painful; violent thirst, with rejection of liquids; pulse very small; lips pale; eyelids closed: she twice uttered a sharp cry, and expired.

The body was examined fifteen hours after death. Between eight and ten pounds of black fluid blood were found in the abdomen; the vena cava and abdominal vessels were empty. There was an opening, of about half a line in extent, on the inner part of the vena cava an inch before it reached the liver.—(*Bull. des Sc. Méd., from the Journal de la Gironde.*)

XI. *Cicatrisation of Nerves.*

M. LARREY exhibited, at a late meeting of the Section of Medicine of the French Academy, a preparation made from the dead body of an old soldier whose arm had been amputated; and pointed out the manner in which the nerves of the brachial plexus had become cicatrised. The extremities of these nervous cords were terminated by little tubercles, and united one to the other, so as to form actual curves (*de véritables anses*). This was the third example in which M. Larrey had observed this circumstance.

XII. *Treatment of Cerebral Inflammation.*

In a memoir, entitled *Theoretical and Practical Reflections* on this subject, read to the French Academy, M. Costa objects to the application of ice to the head, as there is no reason, he says, why a means which is not employed in other inflammations should be resorted to in this. He also repeats an objection often before urged, but not a valid one, founded on the belief, that if we empty the external vessels by the application of cold, the internal vessels become more gorged. The constant relief afforded by this measure is, we imagine, superior to all arguments of this kind. He equally objects to blisters. The rest of his treatment is very rational. He orders the head to be shaved, and a number of leeches to be applied along the course of the longitudinal sinus, he then puts on an emollient poultice. He prefers applying the leeches chiefly to the *sinciput*, for three reasons: 1. That inflammations of the brain and membranes are most common in the anterior part; 2. That by this means relief is given to the longitudinal sinus and cerebral veins; 3. Because there is a sympathy between the skin which covers the splavehuic cavities, and the contents of those cavities. M. Costa does not seem to have thought of this sympathy when he objected to the external application of ice.

XIII. *Treatment of Cancer by Compression.*

PROFESSOR RECAMIER, of the Hôtel-Dieu, has made a considerable number of trials of this method of treating cancer: his first

were not successful : in some other cases an amendment was taking place, but the patients became tired of the slowness of the process, and had the tumours removed. In several cases very remarkable relief was given ; and in some a perfect cure was obtained. —(*Revue Médicale, Janvier 1827.*)

XIV. Case of Obstinate Epistaxis.

A YOUNG man, aged nineteen, was attacked with bleeding at the nose, which lasted two days, and was so abundant that he several times fainted. Mineral acids, ice to the back of the neck, the inspiration of cold vinegar, and other means, failed to arrest the bleeding. Dr. Brunner, who was sent for on the third day, caused powdered gum arabic to be blown through a quill up the nostrils, and the hæmorrhage immediately ceased.—(*Id. from Hufeland's Journal.*)

XV. Salivation cured by Calomel.

IN the House of Correction at Rawies, there was a man, aged twenty-three, who every day discharged a considerable quantity of limpid saliva. His face was œdematous, particularly about the sub-maxillary glands, but without being painful. The patient had a cachectic appearance. According to his own account, the affection came on from his being kept in a room where he slept against a damp wall. All the methods employed to check this affection were unsuccessful, and it went on increasing. At last, Dr. Gumper, physician to the prison, ordered him one or two grains of calomel three or four times a day ; and at the end of six days the patient was quite well.—(*Id.*)

XVI. Ligatures of Silk-Worm Gut.

A NEW species of ligature for securing divided arteries has been lately proposed by Mr. Fielding, a highly-respectable surgeon at Kingston-upon-Hull, namely, the silk-worm gut ; a substance in common use among fishermen, being by them attached to the end of their lines. It is of great strength, but easily formed into knots if previously steeped in warm water. Mr. Fielding has published some cases in which these ligatures have been employed ; and states, that the vessels were effectually secured by them, and that although the knots never made their appearance, no abscess, nor any kind of inconvenience, was produced by them : consequently the wounds heal more readily, and the patient, according to Mr. Fielding's statement, is put to less inconvenience by this plan than by the employment of fine silk ligatures, as practised by Mr. Lawrence, the knots of which he has often found were not absorbed, but caused suppuration before they were discharged. Such appears, indeed, to be the consequence in some cases of employing the silk ligature, but only in a small proportion of those in which they have been used : the recommendation of the silk ligature by Mr. Lawrence, and that of the silk-worm gut ligature by Mr. Fielding, are ex-

pressed in words so nearly alike, that, although the plan of the latter surely merits a further trial, its efficacy must be considered doubtful until such further trial is made.

XVII. *Speculum Vesicæ.*

A FEW years ago M. Deleau described an instrument by means of which the meatus auditorius and the fossæ nasales might be conveniently inspected; consisting of two concave metallic mirrors placed opposite to each other, and illuminated by candles, so that the light could be thrown into the passages or parts to be inspected.—M. Segalas has applied a similar contrivance to the inspection of the state of the urethra and of the bladder.—(*Revue Méd.*)

XVIII. *Calculi in the Vesica Seminales.*

M. COLLARD has analysed some calculi which were found in one of the vesiculæ seminales in man.

The calculi were seven in number, and of various shapes and sizes. Most of them were very small, irregular polyhedra. The largest was nearly the size of a pea. They diminished in volume by desiccation. Tried by various re-agents, they were found to consist of:—

Hydrochlorate and sulphate of potash and lime;—an atom of albumen;—and a very great proportion of a peculiar kind of mucus.—(*Nouvelle Bibliothèque Médicale, Fevrier 1827.*)

XIX. *Experiments upon the Reproduction of the Crystalline Lens.* By MM. COCTEAU and LEROY D'ETIOLE, Doctors in Medicine.

THESE experiments are six in number, and prove, contrary to the received opinions, that the crystalline lens may be regenerated. We shall extract the first and the last of these experiments.

‘On the 27th of July, 1827, we removed the crystalline lens from the right eye of a rabbit, of three months old. The incision was made in the superior part of the cornea, on account of the greater ease with which the operation could be performed, and because, as the aqueous humour could less readily escape through the wound, it might enter the cavity of the crystalline, and prevent the sides of its cavity from uniting; to which we in part attributed the non-production of the crystalline. The iris protruded through the wound, and was irreducible. A little blood escaped during the operation upon the left eye. The iris protruded also in this eye, and was equally irreducible with the iris of the right.

‘The animal being left to itself did not appear to suffer: it kept its eyes opened, and walked perhaps with a little less steadiness than before the operation. No attempt was made to ascertain the degree of vision, from the fear of augmenting the causes of inflammation. At night he lay in the darkest place of his pen, and his eyes were half open, and watery.

‘ On the 28th the right eye was closed, and the eyelid considerably swelled and red, especially at its edge. The conjunctiva was injected. A curdled purulent matter was copiously discharged, and the hairs bordering the eyelashes fell off. The left eye was wide open, the circumference of the wound of the cornea was slightly opaque, the iris was protruded, and had undergone no alteration; the portion of the pupil over which the opacity of the cornea did not extend was of a beautiful black colour. He walked firmly, and had a good appetite.

‘ On the 30th the right eye was occasionally opened, and the cornea was very opaque in the neighbourhood of the incision; there was considerable swelling of the protruded iris, and the conjunctiva, acutely inflamed, afforded an abundant purulent discharge.

‘ On the 4th of August the animal appeared to suffer much pain in the right eye, which was very prominent: the cornea was dull and opaque over its whole surface; and the iris was covered with firm granulations. The animal ran and climbed over different obstacles without difficulty.

‘ He was killed on the 9th of August, by injecting air into the external jugular vein. The eyes on examination presented the following peculiarities. The eyelids of the right eye were swelled and excoriated, and the vessels of the conjunctiva deeply injected. The protruded iris was covered with purple granulations; the pupil was irregular; the cornea of a dull white colour; the edges of the wound presented almost through their whole extent a kind of exfoliation analogous to that of tendons; and there was intimate adhesion of the iris. The sclerotica at the place of its union with the cornea was thickened; its section grayish, and its consistence cartilaginous; the aqueous humour transparent and limpid; the iris, the ciliary body, the crystalline membrane, and the anterior layer of the hyaloid membrane, were inextricably confused, but without any appearance of disease; the vitreous humour had experienced no effects from the inflammation of the neighbouring parts.

‘ The cornea of the left eye was slightly opaque near the situation of the incision; the aqueous humour was transparent and limpid; the iris adhered to the edges of the wound, and rendered the pupil rather irregular. An incision into the crystalline membrane, which exhibited a whitish prolongation across the pupil, gave exit to a *crystalline lens*; the consistency of which, a little greater at the centre than the circumference, was less than in its natural state, and nearly resembled that of the eccentric portions of the primitive crystalline; the posterior layer of the capsule, which prevented all communication with the vitreous humour, left no doubt upon this reproduction of the crystalline; the other parts of the eye were perfectly sound.

‘ April 6.—Hitherto the animals had been kept only a month or six weeks after the operation; but considering, that by permitting a longer time to elapse before they were destroyed, a more perfect crystalline might be obtained, we determined to put the supposition to the test of experiment. Accordingly, the extraction of the

lens was effected on two rabbits, on the 6th of June, 1825; and at the end of a month we examined them while alive; one of them saw at this time very perfectly with both eyes; vision was less complete in the other. This last was killed a few days after, by mistake, and the eyes were not examined. The former was kept till the 18th of November, *i. e.* more than six months. The eyes were dissected in the presence of M. Federa. *The crystalline capsules were perfectly transparent, and no cicatrices were visible; they contained lenses as large and as consistent as those which had been extracted.* To render ourselves more certain, they were plunged into boiling water, and became opaque, hard, and friable, precisely as the primitive crystalline; but the lamellated disposition was only evident in the exterior layers.'—(*Journal de Physiologie, Janvier 1827.*)

XX. *Hardening of the Skin in Infants.*

PROFESSOR PALETTA, in two memoirs upon the hardening of the cellular tissue in infants, attributes this phenomenon to congestion in the great venous trunks of the thorax, abdomen, and lungs, and recommends the application of leeches and warm bathing as the most appropriate remedies. In this respect, his opinions agree with those of M. Billard recorded in the last Number of the *REPOSITORY*. The memoirs are contained in the *Annali Universali di Medicina* for July and August 1825.

XXI. *New Substance discovered in preparing Picrotoxine.*

M. MARDEN, in preparing picrotoxine, discovered a substance of which the nature is unknown. It is crystalline, insoluble in cold or boiling water, or in cold or warm alcohol; it is not changed by the sulphuric and nitric acids, but is a little altered by the caustic potash. At a red heat it melts, and burns, and emits an odour like that of burnt linseed.—(*From the Archiv. des Apotheken Vereins; in the Bulletin des Sciences Médicales for Fevrier.*)

XXII. *Treatment of Articular Rheumatism, at the Hôtel Dieu, with Observations.* By M. MARTINET.

THE cases of articular rheumatism were more numerous at this hospital in November and December than for some time past, and presented the usual difficulties, as relates to the treatment, whether it was attempted to suspend or check the progress of the malady. The disorder often seemed to despise every kind of medicine; when driven from one joint by leeches, diaphoretics, purgatives, &c., attacking another, and seeming to continue as long as if no remedial means had been employed. Articular inflammation, which is now generally regarded as an inflammation of the synovial membranes, has this peculiarity, that its mobility is extreme, and that so long as it is not firmly established in one articulation, it may pass to another. Of the greater number of inflammations of other tissues it is possible to arrest the progress, and hasten the

termination. In articular rheumatism, so long as the disorder consists only of an erythema, a simple phlogosis, the joint is easily freed from it, either by the application of leeches, or by ipecacuanha or tartar emetic administered in large doses, or by other means; but when once the inflammation has established itself more deeply, and effusion has taken place within the articulation, the disease cannot any longer be so removed, but will run its stages in the part where it has commenced. It is probable, also, that the movement of the joints presents a considerable obstacle to recovery, by irritating the synovial membrane which is already inflamed.

In articular rheumatism the integuments are generally affected in the same manner as the synovial membrane, and the skin is thickened, and more or less red; this slight cutaneous erythema disappears, like that of the joint, and re-appears in some other point, resembling, in this particular, the equally mobile inflammation of erysipelas. As the disorder often originates in suppressed perspiration, it has been supposed that whatever favoured this function might operate a cure; but facts, which do not always agree with our theories, have shewn that rheumatic patients perspire almost continually, either naturally or with the help of medicines, without any abridgment of the course of the complaint, or any diminution of the pains; from which we may conclude, that to restore the perspiration is not the only indication we have to fulfil.

The disorder began in the phalanges of the right hand, in one patient, accompanied with fever: she was bled, with momentary relief; but very soon the knees became affected, and some days afterwards, the wrist and the scapulo-humeral articulation of the right side. The bleeding was repeated, but the rheumatism did but shift its seat, and was not removed until more than a month after the first bleeding. In six of the cases the effect of local bleedings was not more satisfactory in one of them,—twenty or twenty-five leeches were applied to the joint inflamed with only a transient advantage: in the rest, leeches were applied to the same joint two or three times, with merely a local amelioration, the neighbouring articulation becoming in turn affected; in these the inflammation was pursued from joint to joint, a smaller number of leeches being applied; and the duration of the malady was not less protracted, being from twenty-eight to thirty-five days. Almost all the patients took the Dover's powder: in some it produced perspiration, in others it had no effect at all; some were purged by a solution of tartar emetic, or castor oil, or manna and sulphate of magnesia; but the disorder seemed to proceed so as to leave no conviction of any kind of treatment producing a marked alteration. In some cases, however, the pain was almost wholly removed by leeches; and in other examples anodyne poultices seemed to produce relief: but these medicines very rarely cut the disease short, or caused it to terminate at once. It is not our wish to attack any plan of treatment, or to favour a discouraging scepticism; but merely to detail facts. We have, in other seasons, observed much more successful consequences attend the treatment;

and no one is unacquainted with the influence of the 'medical constitution' on the duration, obstinacy to treatment, and severity of the diseases which appear during its prevalence.

In two patients, in which the articular inflammation was moderate, no treatment was employed, the patients were kept in bed, and had barley-water and honey, and the disorder terminated in a fortnight. In these cases the slightness of the attack is not to be forgotten.

In one female patient, attacked with this kind of rheumatism, the wrist-joint was seriously affected: there was, undoubtedly, ulceration of the cartilaginous surfaces, which sometimes occurs in these affections; a distinct crepitation was heard for some time, even amputation was considered indispensable; but by means of poultices and arm-baths the morbid process was arrested; and at present the absence of pain and the disappearance of the crepitation encourage a hope that anchylosis will terminate this alarming affection. The constitution of this patient was not such as to encourage disease of the joints; but when rheumatism attacks *lymphatic* subjects, as we have often witnessed, the frequent consequence is, white swelling and the loss of the limb.

In the discouraging circumstances above noticed, as generally attending the treatment of the cases now spoken of, Professor Recamier, impressed with the success obtained in a patient affected with sciatica, by means of the oil of turpentine, felt disposed to try its effects in acute articular rheumatism. He therefore prescribed it to six patients, and in the same manner; two drachms being mixed with four ounces of honey, and from two to four spoonful given during the day. Two of these patients were benefited: the oil of turpentine did not excite any perspiration, except in one case, in which it was very abundant, without, however, relieving the patient: its other effects were limited to a little abdominal heat, a sense of weight at the epigastrium, and slight diarrhoea; it seemed scarcely, in any case, to promote the urinary secretion.

XXIII. *On the Use of the Extract of Belladonna in some Cases of Intermittent Fever.*

M. DUCROS, of Marseilles, relates, that in a case of severe intermittent fever, with violent pain in the forehead, and delirium, the sulphate of quinine seemed rather to aggravate than to relieve the symptoms. The fourth paroxysm was prevented by the extract of belladonna, given in a dose of twelve grains; and the patient soon became well: but exposing himself to the marsh effluvia on the borders of the Rhone, the disorder reappeared, and the extract of belladonna again effected a cure.

XXIV. *Practice of Professor Rasori in Intermittents.*

WE merely copy the following illustrations of the practice of Professor Rasori from the foreign journals, for the instruction

of such of our readers as may feel at all disposed to follow that very theoretical practitioner in some other particulars in which he has been imitated in most of the continental schools.

' *Simple Intermittent.* — Gaetano Oriani, aged thirty-five, of a feeble constitution. For five or six days he had been tormented with a quotidian, characterised by a slight shivering, followed by great heat and by perspiration, without any alarming symptoms. M. Rasori ordered a *bleeding*, and *bitter decoction for drink*. The same day, at noon, the fit came on; and in the evening M. Martini found the patient in the following state:—Skin cold, pulse scarcely perceptible, stupor, extreme prostration of strength; Hippocratic countenance. Twelve ounces of wine were ordered, and a mixture of nine ounces of decoction of bark, containing a scruple of laudanum and ten grains of bark in powder, which was taken in the night. The patient continuing in the same state the next day, two grains of opium were given at a dose by M. Martini, the assistant physician, and a bottle of wine. Two hours afterwards, M. Rasori saw the patient; and *thinking the dose of opium insufficient to determine whether or not the diathesis was asthenic*, prescribed six grains of opium, and a bottle of wine to be taken *before the evening visit*. At ten o'clock in the evening the patient died.

' On examination, a small quantity of serum was found in the ventricles of the brain, and the veins of the pia mater were gorged with blood.

' *Quartan lasting thirteen months.*—A young soldier was admitted into the military hospital, who had been troubled with a quartan for seven months. He was at first *bled* (by order of M. Rasori), and took the *tartar emetic in large doses*: he afterwards took myrrh, cuprum ammoniatum, saline and afterwards drastic purgatives. After five months had been spent in this manner, the paroxysms regularly occurring, and being neither increased or diminished in intensity, M. Rasori concluded that *the diathesis was not to be overcome*, and ordered nothing more. In a few weeks afterwards the man got well.

' This circumstance was accounted for by M. Rasori, according to one of his pathological laws; namely, that *diseases of the sthenic diathesis are sometimes insuperable by remedies, and may cease spontaneously*; which cannot happen in diseases of the asthenic diathesis, since they can only terminate by being overcome by stimulants. The quartan, therefore, had ceased, he said, because its character was sthenic.

' For my part,' adds M. Prato, the narrator, ' not having faith in dreams, I took an opportunity of questioning the patient, who confessed that he had been indulging himself with some wine, from which he had been debarred for many months, and that he had drunk about a bottle and a half a day, and at once, a little before the time of the fit. From the first day of his doing so, the violence of the attacks was diminished; the second attack was hardly noticed; and a third never came on.'—(*Journ. des Progrès des Sc. et Instit. from the Giornale Critico di Medicina Analitica.*)

XXV. *Yellow Fever.*

M. ANDONARD maintains, that the yellow fever is not endemic in any country, that its cause is always imported, and proceeds from those vessels in which all the elements of a powerful infection are united,—as, for instance, the slave-ships, and all in which there is a somewhat similar assemblage of circumstances. He has lately laid before the French Academy a singular piece of testimony in favour of the truth of his opinions, being in fact a letter from the commandant of Cadiz—to the following effect :—

‘ Cadiz, Jan. 5, 1827.

‘ Monsieur le Docteur,—I will communicate to you a fact confirmatory of your opinion concerning the origin of the yellow fever. Last year the physicians of Cadiz announced that this disease could not fail to break out, in consequence of the abundant rains of the winter and spring, and the great heat of the summer. This report was so spread about, and produced so much alarm, that those gentlemen became afraid, and thought themselves obliged to contradict it in the journals. Notwithstanding their prognostics, however, the state of health during the summer was very satisfactory; and no symptom of an epidemic or contagious disease was met with: I have even observed, that during this season the mortality was less than that of the preceding year at the same season, and less than in the other months of the year.

‘ I have the honour to be, &c.

‘ Le Vicomte GUDIN,

‘ Lieutenant-Général, Commandant à Cadix.’

M. Andonord seems mightily pleased with this military support. It is singular, however, that none of the physicians at Cadiz should have noticed these circumstances; and still more so, that the opinion which General Gudín ascribes to the resident physicians of the place, is one which, according to his own account, they publicly discovered.

XXVI. *Spreading Ulcer of the Nose.*

THE following case, which is inserted in the *Annales de la Médecine Physiologique*, is one which illustrates the advantages which there can be no question have been brought to French medicine by the founder of what is called the physiological school.

‘ A labourer, aged twenty-four, of a robust constitution, was attacked, without any known cause, with small ulcerations of the mucous membrane of the nose, which remained stationary for about a year: pain being then felt in the affected part, a physician was consulted, who ordered emollient injections, and afterwards the local application of calcined alum; but this treatment was unsuccessful. A second physician prescribed sulphureous fumigations, pastilles of sulphur, ptisans of fumatory and scabions, and derivatives to the intestinal canal. This treatment was continued six or seven months, during which the mucous membrane became thick-

ened, the ulcerations extended, were covered with fleshy excrescences, and accompanied with a great increase of pain. A third physician employed the lunar caustic, and, that not appearing active enough, the sublimated muriate of antimony. The excrescences were destroyed by several cauterisations, and, re-appearing a few months afterwards, were again removed in the same manner. The affection of the nose had now continued from 1818 to 1823, and the nose had become very large, red, and painful, the edges of the alæ began to ulcerate, and to secrete a fœtid, purulent matter. The patient now came to consult one of the most celebrated Parisian surgeons, who recommended emollient injections, ptisane of hops, tincture of gentian, a blister to the arm, and then a caustic issue: the patient was told to wear flannel; but *local bleeding was interdicted as dangerous*. This treatment was persevered in for some time without benefit. In April 1825 the patient seems to have come under the care of a Broussaian practitioner, and in the following state: Nose very large, red, and painful; the alæ covered with scaly ulcerations; the upper lip swelled, ulcerated, and divided from the septum by a deep ulceration; the redness spreading to a part of the cheeks and to the lower eyelids; the eyes lachrymatory, with increased sensibility to light; the nasal mucous membrane thickened, ulcerated, covered with very large fleshy excrescences; discharge of sanious and fœtid matter; passage of the nose nearly occluded. The patient also laboured under chronic gastritis, was weak, and low-spirited. Twenty leeches were ordered to be applied round the nose every two days; frequent emollient fomentations; the local vapour bath; general bathing; stimulating pedilavia; a strict regimen; vegetables, milk, white meats; demulcent or acidulated drinks; avoidance of exposure to the sun or to cold air; flannel waistcoat and drawers. This treatment, being strictly observed for two months, caused all the inflammatory symptoms to disappear, and by about September the cure was almost completed: the redness and swelling of the nose were gone; there was a loss of substance of the ala on the right side; all the ulcerations were healed; and the only inconvenience felt by the patient was a little itching of the nose, and some appearance of redness, after fatigue or exposure to the heat of the sun.

XXVII. Increase of Population.

UNDER this head, as being at least a little connected with medical science, it may be mentioned, that M. Dupin, in his late *researches concerning the connexion between the state of popular instruction and the state of morality in different parts of France*, makes a remark which, at first sight, has a little appearance of singularity, but of the correctness of which there is no reason to doubt; namely, that the fecundity of the best-instructed districts is much greater than that of the neglected; or, in other words, that the population of the enlightened districts increases faster than that of the ignorant districts. This effect M. Dupin attributes to their superior instruc-

tion, inasmuch as that benefit leads to the increase of their resources. The increase of the population has also a direct relation to the increased longevity of the inhabitants.

M. Dupin's name will be remembered by our readers in connection with a very able work on the state of the arts, and on the resources of Great Britain. His great talents have been recently, in a particular manner directed to his own country, and very great results may be expected from his recent researches into the effects of education. Although the subject is not strictly medical, we may yet mention that his testimony is greatly in favour of the instruction of the lower classes; and that his observations prove that, together with education they attain an increase of all the blessings of life, and become improved in conduct. We never doubted that this would be the result of the more general cultivation of the higher faculties of human beings, and could never persuade ourselves to think, that in proportion as the mind became improved, the heart would become corrupt; for we think, with the greatest philosopher of our own country, that 'they be but the clouds of error which descend in the storms of passions and prejudices.' But as many people deny these fine things, it is useful to observe and remember *facts*; and as we have mentioned the subject, we may further remind our readers, that, on an occasion the nature of which we do not at this moment recollect, several of the principal manufacturers of this country described the effects of education on the habits of their workmen in terms which agreed with the statements now made, after a very careful investigation by M. Dupin. We refer such of our readers as feel an interest in this subject, to the *Revue Médicale* for February, page 336, where they will find some observations which cannot but prove highly gratifying to all who wish to view their fellow-creatures in a favourable light.

XXVIII. *Death from the Bite of a Viper.*

ON the 26th of August, 1824, a shepherd of Radonsk, near Marienwerder, caught a viper in a wood, and gave it to another shepherd. The latter let the reptile twine itself round his arm, and allowed it to put its head in his mouth, on which the viper bit his tongue. The part immediately swelled so much, that when the man reached the nearest village he was unable to speak; the swelling increased rapidly, so that his tongue hung partly out of his mouth; and two hours afterwards the poor man died a victim to his imprudence.—(*Arch. Gén. from Rust's Mag.*)

XXIX. *Death in consequence of a Bite by a Cock.*

A STRONG and healthy young woman, aged thirty-six, was bitten in the region of the left eye by an irritated cock which flew at her. She paid little attention to the pain and the bite, and for about a week different ointments and plasters were employed. The surgeon, however, often observed that when the dressings were changed, there were convulsive motions of the whole body; and a spasmodic

contraction on the face of the injured side. The left eye became prominent, the pupil was dilated, and the globe of the eye was sometimes moved involuntarily, and in various directions: there was also trismus. (These symptoms, and indeed all the symptoms, constitute a sort of practical illustration of Mr. Bell's views of the nervous system.) The plasters, when removed, were always found covered with little granulations, and rather moist. The wound had penetrated the superciliary muscle, as far as the bone, near the upper orbital foramen, and looked healthy. A hard, detached substance, of about the size of a lentil, was discovered at the bottom of it, of a calcareous nature. The treatment is not detailed: but pains in the back and limbs came on, want of sleep, difficulty of deglutition, stronger convulsive movements, and constipation. Involuntary stools succeeded, complete rigidity of the upper part of the body, diminution of the intellectual powers, groans, trismus, tetanus, and death.—(*Id.*)

XXX. *Mania from Sobriety.*

A VERY drunken fellow was imprisoned for theft, and put at once on a diet of bread and water. He very soon lost his flesh considerably, became pale and languid, passed his nights without sleep, and manifested a disturbed state of his intellectual faculties. Delirium supervened; at first of a mild character, and afterwards more furious. The poor man imagined himself surrounded by horrible figures, which were inflicting torments upon him, and he uttered dreadful cries. Dr. Hansbrandt, who was called to attend him, having learnt his previous habits, suspected that the total abstinence from alcoholic liquors had been the cause both of his emaciation and of the mania. He therefore ordered him to have a little brandy twice a day; and, under this treatment, cerebral disturbance soon became allayed, the patient gradually regained his flesh and strength, and remained in good health during the rest of his period of imprisonment.—*Rust's Mag.*

XXXI. *Experiment on Absorption.*

M. STARD has made some experiments to ascertain the effect of the application of cupping-glasses on absorption. His experiments were made in connexion with vaccination. He vaccinated three children, one of whom had already been vaccinated, the second a doubtful case, and the third not having had either variola or cowpox. In the first and second, the vaccination had no effect; and in the third, there appeared on the arm to which the cupping-glasses had *not* been applied five vaccine vesicles, and on the other one vesicle, one puncture on that side not having been included in the cupping-glass. M. Bousquet has also made experiments on this subject, and states that the development of the influence of the vaccine inoculation is not in any way arrested by the application of the cupping-glasses.—(*Rev. Méd.*)

XXXII. *New Method of Treating Asthma.*

WE do not remember at any time to have seen a more ingenious remedial means proposed in any disease than that which Dr. Francisco Chiarenti has, it seems, recently employed with great success in asthma. Dr. Chiarenti had observed the great relief obtained during the asthmatic paroxysm by a prompt exposure to cold air, and particularly to the wind; and being himself afflicted with this complaint, he bethought himself of imitating the action of the wind by artificial means, and, as the simplest and readiest, by the use of a pair of common bellows. To this end, he introduced the pipe of a pair of bellows into his own mouth, and blew away for a considerable time, thus 'introducing a great quantity of atmospheric air into his lungs.' This curious experiment is reported to have been highly successful; and he has found the same expedient powerful enough to put a speedy end to the most violent paroxysms of asthma. After trying it several times on himself he applied it to others, and with the best effects. In fine, after many opportunities of proving its efficacy, of which a future account is to be given, Dr. Chiarenti has become of opinion that insufflation is not only a palliative in the violence of the attacks, but possesses the power of effecting a radical cure, except in cases where there is much organic mischief. We offer no opinion upon this, although we must observe that the fresh air and the wind are very far from alleviating some patients who are subject to asthma. The account of Dr. Chiarenti's trials is copied into the *Journal des Progrès des Sciences et Institutions Médicales* from the *Antologia di Firenze*.

XXXIII. *Case of Asphyxia, with Recovery after many hours.*

A GROCER'S apprentice, who slept in a very small and ill-ventilated room, filled a shovel with coals, lighted by means of pieces of the barrels in which groceries had been contained, and after warming himself, went to bed. At five in the morning he was found without motion or consciousness, and there was a smell of coal in the room. He was immediately carried into the open air, and exposed for half an hour to the cold of a winter's morning: there was general insensibility, complete loss of power over the limbs, no respiration, the face puffed and of a bluish colour; but the heat of the body remained, and was equally diffused. Cold vinegar and water were sprinkled on his face, and a vessel containing æther placed under his nose; still he did not revive: he was then carried into the house, the whole body was rubbed, air was gently directed into the lungs, (an attempt being previously made to draw the asphyxiating gas out of the lungs by means of cupping-glasses,) and enemata of cold vinegar and water were administered. For a long time all these means seemed without effect, and death appeared certain. However, a slight *râle* was at last heard in the lungs when the ear was applied to the chest; and after three hours of unremitting efforts, the commencement of respiration was distinctly

heard by the stethoscope. A glass placed over the mouth was found to be sullied, the nostrils were slightly agitated, and a kind of horripilation pervaded the skin. Bleeding was tried in one arm without success, and some minutes afterwards a vein was opened in the second, and about eight ounces of blood came very slowly (*goutte à goutte*); sinapisms were applied to the feet, the scarificators and cupping-glasses applied to the chest and along the spine, respiration and circulation were gradually restored, and in about eleven hours the organic functions had resumed their full exercise; the patient, however, remained in a state of profound coma an hour longer.

When this case was read to the Section of Medicine of the French Academy, by M. Bourgeois, an old army surgeon, he related, that when he was in Spain, the whole *ambulance* of the advanced guard were, on one occasion, nearly destroyed by the burning of coal. The effect was great disposition to sleep, with a kind of luxurious feeling that precludes all attention to safety. A cannonade, on the occasion referred to, was the means of saving the asphyxiated soldiers; but they all complained bitterly on account of being awakened from such comfortable repose, and were affected with headach, vertigo, and a kind of intoxication.

XXXIV. *Death of Dr. Abel.*

WE have read, in the latest accounts from India, and with profound regret, the death of Dr. Abel, physician to the Governor-General. This accomplished physician accompanied Lord Amherst to China, and on the return of the embassy, published a very interesting account of it. He then resided for a time at Brighton, where we believe he got into considerable practice. But on the appointment of Lord Amherst to the Governor-Generalship of India, he gladly availed himself of the offer of going out as his physician, influenced far less, we believe, by the prospect of splendid emolument, than by the hope of being able to indulge his taste and pursue his studies as a naturalist. The particulars of his death have not reached us, nor are we able to say whether or not the public will have an opportunity of benefiting by any researches made by him during his residence in India. Dr. Abel was in the prime of life, and greatly esteemed by all who had opportunities of knowing him.

Clinical Report of the most prevalent Diseases during the preceding Month.

THE early part of April was very mild; and about the middle of the month much rain fell. Since the 20th it has been very much colder.

April has been unusually healthy; there has neither been any epidemic, nor have the diseases which have presented themselves been very severe. Febrile complaints were perhaps the most

general; and in some cases these were attended by disorder of the bowels. Much as we are opposed to the generalising system of Broussais, that 'essential fevers are nothing else than gastro-enteritis;' repeated experience has proved to us that gastric derangement is the most frequent concomitant of fever, and that the most successful treatment is that which particularly regards this concomitant. He, however, will be much mistaken who expects to find this derangement in every case of fever; it is most frequent, but not universal. Rheumatic affections have been frequent; and in children we have still witnessed many instances of inflammation of the lungs.

In the course of the month, we have examined a case of uterine disease, in which a large fungous growth had originated from the fundus of the uterus, and extended into the vagina. The cervix of the uterus was scarcely discernible. The patient, a woman about fifty years of age, had been under our care for more than two years. The disease had existed for some months before we saw her; and she was subject to severe bearing-down pains, with profuse hæmorrhage. She experienced at different times very great aggravations of the complaint. After, perhaps, being tolerably well for some time, a profuse hæmorrhage ensued, accompanied by a copious discharge of a putrid fleshy substance. When this had continued for some time, anasarca supervened; and she had vomiting, and incapability, from this cause, of taking food. After five or six weeks the hæmorrhage gradually subsided—she as gradually recovered her strength, and the anasarca disappeared. She often became so well in the intervals of the attack, that she walked about, and pursued her usual occupations as though in the enjoyment of perfect health. For the last year and a half she had taken an ounce of the liquor opii sedativus of Battley, daily; and, if by any chance she omitted her usual dose, very violent uterine pains immediately came on. The spleen was very large, but every other organ thoroughly healthy.

LITERARY INTELLIGENCE.

Dr. Gordon Smith's work on Toxicology, which has been long delayed through ill health on the part of the author, will shortly be ready for publication.

Pathological and Practical Observations on Spinal Complaints, &c., and an Inquiry into the Origin and Cure of Distorted Limbs, by Dr. Edward Harrison, is in the press.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. *Traité Médico-Chirurgical de l'Inflammation.* Par J. Thomson, M.D., &c. &c. &c. Par A. J. L. Jourdan, et F. G. Boisseau. Paris. Baillière. 1827.

This is a translation of the valuable work of Dr. John Thomson, of

Edinburgh, on Inflammation,—a work which we are sorry to find is not to be procured in the original. We fear we cannot promise to read a translation of a book written originally in our own language, and with an elegance not very common in medical writings. We see nothing in the notes which particularly calls for attention. They are rather numerous, and many of them are very trifling. We are glad, however, to find that so useful a work is placed within the reach of French readers, few of whom have any acquaintance with English. It had previously been translated into Italian and German.

It seems very strange, on this side of the water, to be told in the translator's preface, that the masters of the art in medicine are Sydenham, Willis, Cullen, and Brown. The reputation so long enjoyed on the continent by the latter is enough to pervert the ambition of all the medical students in the world; since it shews, that to frame an artificial theory, to deride the wisdom of the age and of all past ages, and to make confident assertions, with an utter disregard for human life,—are sufficient to elevate a man of ordinary ability and very scanty knowledge into a first-rate medical authority.

2. An Essay on Morbid Sensibility of the Stomach and Bowels, &c. By James Johnson, M.D. Second Edition.

3. An Introductory Lecture to a Course of Surgery, delivered at the Richmond School of Medicine, Dublin, on the 8th day of January, 1827. By Richard Carmichael, Esq., M.R.I.A., one of the Senior Surgeons of the Richmond Surgical Hospital.

4. Some Observations on the Medicinal and Dietetic Properties of Green Tea, and particularly on the controlling influence it exerts over Irritation of the Brain. By W. Newnham, Esq. London, 1827.

5. Elements of Physics; or Natural Philosophy, General and Medical, explained independently of Technical Mathematics. By N. Arnott, M.D. London, 1827.

We have looked over this volume, and the subjects treated of in it seem to be explained in a very clear and interesting manner. Some parts of the chapters on Mechanics, and in particular the section on *Animal Mechanics*, and also the sections of the next chapter, on Hydrostatics, Pneumatics, and Acoustics, contain much that is closely connected with the studies of the physician and surgeon. We know of no work in which this kind of knowledge is so distinctly presented to the medical reader. The volume now published relates only to the philosophy of *ponderable matter*; and the subjects of the second, to be hereafter published, comprehended under the philosophy of *imponderable matter*, viz. caloric, optics, electricity, magnetism, &c. will not be less worthy of the attention of the members of our profession. The value of some acquaintance with Natural Philosophy is known to us all; but the difficulty of obtaining it is often very great; and in this view we cannot but consider Dr. Arnott's book as a publication which promises to be essentially serviceable both to students and practitioners.

6. Observations sur la Nature et le Traitement de l'Epilepsie. Par M. Le Baron Portal. Paris, 1827.

7. The Second Report, with Remarks Practical and Illustrative, on Vaccine Inoculation. By John Daglish. Newcastle, 1827.

8. Observations on the Impropriety of Men being employed in the business of Midwifery. Hunt and Clarke. London, 1827.

9. Medical Botany. No. IV.

We can only repeat our opinion of this work. The present Number is not inferior to the former.

THE METEOROLOGICAL JOURNAL,

From the 20th of MARCH, 1827, to the 19th of APRIL, 1827.

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| March. | Moons. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|--------|--------|-------------|--------|------|------|--------|---------|------------------|---------|--------|---------|------------------|--------|---------|
| | | | 9 A.M. | Max. | Min. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 2 P.M. | 10 P.M. |
| 20 | ☾ | | 50 | 54 | 48 | 30 | 11 | 30 | 08 | 96 | 95 | SW | W v. | Cloudy |
| 21 | | | 51 | 54 | 47 | 29 | 95 | 29 | 96 | 97 | 88 | W | W | Fair |
| 22 | | | 57 | 58 | 46 | 29 | 95 | 29 | 97 | 86 | 87 | W | W | Fine |
| 23 | | | 53 | 58 | 45 | 29 | 97 | 29 | 96 | 84 | 85 | WNW | WNW | Fine |
| 24 | | | 56 | 58 | 45 | 29 | 94 | 29 | 90 | 78 | 83 | W | W | Fine |
| 25 | | | 51 | 52 | 35 | 29 | 85 | 30 | 03 | 83 | 75 | W | WNW | |
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| 3 | | | 52 | 58 | 46 | 29 | 96 | 29 | 94 | 98 | 87 | W | WSW | Cloudy |
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| 16 | | | 50 | 54 | 42 | 29 | 93 | 29 | 93 | 79 | 82 | NNE | N | Fair |
| 17 | | | 47 | 54 | 41 | 29 | 91 | 29 | 88 | 86 | 87 | N | SE | Cloudy |
| 18 | ☾ | | 43 | 47 | 44 | 29 | 79 | 29 | 64 | 92 | 93 | WNW | WNW | Rain |
| 19 | | | 47 | 52 | 39 | 29 | 63 | 29 | 56 | 85 | 88 | NE | SE | Cloudy |

NOTICES TO CORRESPONDENTS.

We have to return our best thanks to Dr. Gordon Smith for his communications. We rejoice, as we are sure all the friends of that gentleman must do, to find that his health is sufficiently re-established to permit him to resume the useful and honourable labours in which he has already so much distinguished himself.

We have to thank another 'good-natured friend' for pointing out some symptoms of returning *epid* in a quarter where the silence preserved for some time would have been, as we shall presently show, rather more advantageous.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

. Communications, and Works for Review, are requested to be addressed (post paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 32 Fleet Street.

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No. 162.

JUNE 1, 1827.

VOL. XXVII.

No. XXIV.—NEW SERIES.—VOL. IV.

PART I. R E V I E W.

I.

EPILEPSY.

Observations sur la Nature et le Traitement de l'Epilepsie. Par M. LE BARON PORTAL, Premier Médecin du Roi, &c. &c. A Paris, Baillière. 8vo. Pp. 472. 1827.

Observations on the Nature and Treatment of Epilepsy. By BARON PORTAL, First Physician to the King, &c. &c. Paris, Baillière.

THE reputation of M. Portal has obtained from us for this thick octavo—what we should otherwise undoubtedly have been deterred from—a perusal; for we honestly confess, that we do never so heartily repent of having entered on the laborious duties of reviewers as when we are presented with a complete treatise from the Parisian press after the model on which the present is very accurately formed. M. Portal's treatise commences with a preface, in which he enumerates all those who have signalled themselves by opening the heads of patients dying of epilepsy: we have then an hundred pages of cases and reflections; after which are given the most minute and full observations on the character, denominations, divisions, and differences, diagnostic, seat, causes, prognostic, and treatment, including every fancy ever entertained, and every medicine ever employed in the disease, even those acknowledged to be the most absurd; and the book not having by these means attained the desired bulk, we find a certain number of formulæ, and 'extracts from divers authors:'

VOL. IV. NO. 24.—NEW SERIES.

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and all this is concerning one disease, every thing truly valuable concerning which might, we venture to say, have been given to the reader in about one-fourth of the number of pages. The book is altogether an example of the besetting fault of the French school—a fault peculiarly unfavourable to medicine as a practical art, intended to be of use to mankind; we mean that of collecting endless details without any discrimination, and overwhelming the student with a load of facts recorded with no very constant regard to their having a useful bearing on the treatment of disease. Such treatises might be compiled by men of the most moderate share of intellect, and, indeed, may be generally considered as indications only of the dogged industry of the authors, and of a sluggishness of all the higher faculties of the mind. M. Portal complains, at the end of his ‘copious index’ of his ‘*long et pénible ouvrage* :’ wearied with the desperate industry he has exerted, he himself feels some share of the dulness of the labour he has inflicted on his readers. Yet we do not wish to speak flippantly of the first physician to the King of France, and shall endeavour to give a fair account of such parts of the work before us as appear deserving of particular attention.

Setting aside, then, the just objections arising from the prolixity of this treatise, we must give the author the credit of having well arranged his subject; and if the method he has pursued in his work is that followed in his lectures, which we believe to be the case, we cannot imagine a more convenient one for those who are to learn the results of his great learning and experience; since it consists, if we disregard certain nominal distinctions and useless repetitions, of a statement of the nature of the disease as shewn by examination after death, a detail of the phenomena of the malady, an investigation into its causes, and a consideration of the best methods of treating it. Our notice of the publication must be made with a regard to this order.

In the section devoted to the enumeration of the lesions of the brain and its membranes found in epileptic subjects, we do not find any thing which has not been mentioned by previous authors. The increase and diminution of volume of the brain, said occasionally to be met with, is perhaps of very little importance; the sanguineous engorgements, the serous infiltrations, the presence of hydatids, ulcers, tumours, exostoses, ossifications either in the brain or spinal marrow, although in the cases reported they were doubtless connected with the epilepsy, are, it must be remembered, by no means confined to this form of disease. Most of these appearances have been also found in the brains of lunatics, and some of

them in paralytic and apoplectic subjects: they have sometimes been met with in cases in which no epileptic symptoms, nor any of the symptoms of apoplexy or paralysis, had been observed. An investigation into the various morbid appearances in cases in which the symptoms have been carefully noted, may lead to more successful treatment; but we seem as yet to have advanced very little towards an explanation of the various phenomena connected in different cases with appearances of the same nature. With a view perhaps to getting over this difficulty, some morbid anatomists have paid particular attention to the morbid appearances presented in other parts of the body in epileptic subjects; and their labours have been particularly vindicated by the fact, that in some cases of epilepsy the brain has shewn no sign of lesion or disease. The truth is, that the peculiar irritation of the cerebrum, of whatever nature it is, which produces epileptic paroxysms, often arises in the first instance from some disturbance of the functions of other organs, as of the stomach, intestines, or uterus: this irritation long continued, or frequently repeated, may be succeeded by actual disease of the brain. But authors have not, we think, been correct in seizing, in the absence of manifest cerebral disease, on any affection that happened to exist in the lungs, liver, spleen, or other organs, and setting such disease down as the efficient cause of epilepsy. There are, however, many well-established cases on record, in which epileptic attacks have been primarily caused by some accidental irritation of a nerve, in a part distant from the brain; although even in these cases there must be supposed to have been some occasional state of the brain arising from, or superadded to, this permanent cause of irritation at the time of the attacks. It is this unexplained circumstance of superaddition which constitutes all the difficulty of describing the nature of epilepsy. A permanent source of irritation in the brain, or in a nerve, is often manifest; but we want to know how it happens that the brain tolerates this irritating cause in the intervals of health, and what new circumstance in the cerebral condition it is which raises up the vascular disturbance, and the irregular nervous excitement; and the muscular agitation, with the mental and sensorial torpor, during the violent paroxysms of the disease. The most accepted doctrine of the day is, that there is a 'peculiar state of cerebral irritation;' and of such a state, indeed, we see something like evidence in the other phenomena; nor can we offer any better explanation of what takes place.

Epilepsy is one of those diseases of which the study has been retarded, and the treatment corrupted, by superstitious

notices concerning its nature and causes. Up to a very late period it was generally looked upon as of a different nature from all other diseases, and perhaps as a more direct infliction from the hand of the Almighty. The suddenness and frightful character of the attacks, and the frequent fatality of the disorder, partly produced these opinions; and other circumstances strengthened them. Heat being among the predisposing causes, the attacks occurred so frequently in the comitia of the Romans, as to acquire for the malady the appellation of *morbus comitialis*, whilst the fearful phenomena presented were naturally connected with ideas of evil augury. The names also of *sacred* and of *divine*, given to the disease among the Greeks, probably originated in fear; although the latter epithet was given to it by Plato, it is said, because the malady attacked the divine part of the mind. Among the French it is often called *le mal de Saint Jean*, the day of that saint being in the hottest part of the year, when attacks of epilepsy are observed to be most common; and the superstitious dread of its invasion having most likely caused its association with that day in particular. The disease, however, has not always been placed under the patronage of saints, but in many countries ascribed to the especial agency of demons: and although we live in times when such fancies are no longer cherished in places which fully partake of the benefits of education, we cannot give our country the credit of having altogether thrown them off; we could indeed detail some singular instances of superstition yet existing respecting this disease and some others. Nor can we be surprised, that in retired villages, in inland parts of the country, a belief in demoniacal agency and witchcraft should yet be entertained, when we consider that the treatment of the very disease of which we are speaking has presented, up to a very recent period, a most extraordinary proof of the opinions formed of its nature by practitioners of physic. Even at this day we are inclined to think, that frightful and disgusting methods are sometimes employed to cure this malady; means apparently intended to terrify and cast out, or, as it were, to exorcise it from the body: we have at least known measures proposed, and received with favour, of which the only recommendation has appeared to be, that they were ungentle and strange. The disease is not only often incurable, and its causes obscure, but its character is also often capricious, and intervals of relief occur of such deceptious continuance that the last remedy employed gains the credit of cure. In all chronic disorders, in which honest practitioners hold out no certain hope of relief, the patients and their friends seek refuge from despair in measures quite out

of the pale of ordinary practice. The best designed plan of treatment may require too much time for its accomplishment, the steps by which the scientific practitioner attempts to advance towards a cure may be too delicate, and the series of operations he proposes to effect by medicinal or dietetic agency, may be too gradually performed for the patience of the uninstructed. In these circumstances quackery sometimes achieves a triumph, and the patient recovers; and sometimes a triumph far less agreeable is made over the integrity of the practitioner himself. Mocked by the inflexible obstinacy of the disease, goaded by the doubts and fears of the bystanders, he departs almost insensibly from the line of well-directed attack, has recourse to wild and irregular specifics, and forgets the principles of cure in a vain desire to please his patrons. The best worldly prevention of this unhappy dereliction from moral duty will be found in an attentive consideration of the malady and its causes; for although such a study will convince us that many forms of it are incurable, it will point out by what legitimate measures other forms may be subdued. Guided by a competent knowledge of the disease which we have to treat, our success will be satisfactory to ourselves, or our want of power to effect a cure will be felt without self-reproach.

The divisions of epilepsy admitted by M. Portal are the following:—

‘ 1. With relation to the danger and to the duration of the malady; an *acute* and a *chronic* epilepsy.

‘ 2. With relation to the number of causes, and of accidental circumstances in the disorder; a *simple* epilepsy, and many forms of *complicated* epilepsy.

‘ 3. With respect to the seat of the disorder; as when it is fixed and constant in the brain, or *idiopathic*; and when, as in many other cases, it is in other parts of the body, or *sympathetic*.

‘ 4. With relation to the age and sex of the patient.

‘ 5. With respect to the times of the attack; a *diurnal* and a *nocturnal* epilepsy.

‘ 6. Remarkable differences have been observed in epilepsy in different climates.

‘ 7. Epilepsy, as well as convulsions, exhibits many variations, dependent on the causes, the seat, the intensity, and the consequences of the malady.

‘ 8. Epilepsy is a disorder of very frequent occurrence.’

From what cause, excepting a desire to appear extremely methodical, the seventh and eighth observations in this passage are given, we cannot imagine; but such is the fashion of exactness among French authors. The other divisions have some reference to circumstances deserving of con-

sideration. Among the complicated cases of epilepsy is to be numbered the not unfrequent dependence of the disorder on the presence of worms in the intestinal canal, or on dentition : in the former case the removal of the worms will sometimes lead to a perfect cure ; but when there have been frequent paroxysms, they will continue to recur when the original cause is got the better of ; and in this case, at least, the consideration of the time the disorder has lasted becomes of consequence. Instances have come under our observation in which practitioners have been too anxious to establish the dependence of the disorder on local irritation, in patients of families presenting a constitutional predisposition to the disease : we have thus known several teeth very uselessly drawn one after the other. In some cases on record the fact of local irritation of a mechanical kind is well established, as in the case quoted by Dr. Cooke from the *Edinburgh Medical Essays and Observations*, in which violent attacks of epilepsy were occasioned by a hard cartilaginous substance of the size of a pea, situated upon a nerve ; for in that example the extirpation of the tumour was followed by the cessation of the disease. In other instances, and those very numerous, various irritations of other organs have seemed to produce that yet undescribed state of brain in which epileptic paroxysms occur ; as acrid substances in the stomach or intestines, calculi in the gall-bladder, or bladder of urine, or in the kidneys, and peculiar states of the uterus. M. Portal conceives that more women than men are attacked with epilepsy : Heberden was of a different opinion ; and, among the ancients, Celsus. Men are more exposed to the exciting causes of this disease, but we cannot help thinking that women have a greater predisposition to it. In men, the predisposition is frequently connected with a cerebral constitution of an extraordinary character : like other nervous affections, it is often the concomitant of superior intellect ; and there would seem to be a kind of struggle in some of the subjects thus characterised between a vigorous mind and a defective constitution of body. In Julius Cæsar the mind had always the ascendancy ; in Mahomet, and even in Petrarch, the victory was often doubtful ; in Rousseau it sunk at last degraded and subdued. Not many months before his death, the late Lord Byron had a violent epileptic seizure ; and Napoleon is said to have been subject to the same disorder. The frequent occurrence of the attacks in the night would be less remarkable, if cases were not met with in which the attacks always take place during the day : in many cases the attacks in the beginning of the disease take place in the night ; and as the disease advances, they occur either in the night or the day.

M. Portal asserts that epilepsy is more frequent in hot than in temperate climates, and more common in towns than in the country. His definition is as little open to criticism as any brief description of a disease which may vary exceedingly in intensity and duration can possibly be.

— ‘ A sudden loss of sensation, more or less complete, together with a convulsive affection, either of the tonic or atonic kind, of many muscles, or of one muscle only; and delirium, followed by loss of memory of uncertain continuance.’

There is certainly no particular difficulty in recognising an epileptic attack; and yet there is a frequent and curious blending of the symptoms of this disease and hysteria. The whole family of nervous disorders, as they acknowledge causes of the same kind, and causes too not always broadly distinguishable by their intensity, so also exhibit a tendency in their symptoms to pass into one another. We should not only admit a true hysteric epilepsy, but admit many other mixed cases which occur in practice, and which there exists no necessity for classing under any one arbitrary denomination: it may be sufficient, in order to explain our meaning, to remind the practitioner, that stertorous breathing and globus are both sometimes met with in epilepsy—that convulsive motions are not uncommon in hysteria—that stertor and convulsions are both seen in attacks of paralysis and apoplexy—that opisthotonos and emprosthotonos are sometimes seen in both epilepsy and hysteria—that attacks of paralysis and epilepsy are preceded by remote local pains;—in short, that the motive and sensorial powers are both affected, and in every shade of variety, in all these disorders.

It is worth while, on many accounts, to attend to the premonitory symptoms of an epileptic fit: the most common appear to be vertigo, and pains of the limbs, or in different parts of the body: various affections of the senses are also sometimes experienced, doubtless caused, as well as the vertigo, by disturbance of the circulation within the head. We were some years ago consulted by the friends of a young lady, who, without any offence of which she was conscious, was said to be occasionally visited by the unwelcome ghost of her deceased grandmother: the young lady was accustomed to sit up late, and devoted herself, with an industry which would have been very praiseworthy in a better cause, to the perusal of romances and novels; and it repeatedly happened that, after bending over some tale of unusual interest for an hour or two after the other members of the family had gone to bed, she found on raising her eyes that the figure of her grandmother was on the opposite side of the table. On these

occasions her first efforts were directed to reaching the door of the room, and the figure seemed to try to intercept her flight, on which she fell down in a fit of epilepsy; and this happened repeatedly. Dr. Gregory used to mention, in his lectures, the case of a patient whose attacks were always ushered in by the appearance of an old woman in a red cloak, with a large stick in her hand; and the figure always seemed to come nearer and nearer until it was near enough to knock him down. The spirits are frequently depressed before a fit; and sometimes there is a marked irritability or ill-humour; but in some patients the attacks are always preceded by unusual gaiety. The attack is very commonly ushered in by a piercing cry. M. Portal mentions instances in which patients had notice of the approach of epilepsy by the appearance of cutaneous eruptions. In some individuals the epileptic paroxysms pass over so slightly as rather to seem warnings than actual invasions of that terrible malady. They may occur in sleep, and the weakness and oppression be the only proofs to the individuals of attacks with which others have seen them affected. The eyelids, or the fingers, or toes, may alone be convulsed, with some oppression of the respiration; and yet under a repetition of these apparently slight attacks, the intellect of the person so afflicted may become weakened, and the attacks pass on to the most unquestionable forms of the severest epilepsy. In two cases, both of which were eventually fatal, we knew the disease to exist for some years in such a form as merely to suspend the occupation of the patients for a few moments at the time of each attack: if reading aloud, they would stop, seem to lose their consciousness for a few minutes, and the head would be a little agitated, and the eyes raised; but the patients did not fall down. These attacks became very frequent, and more and more severe: both patients were subject to oneirodynia, and both died before they attained adult age. A year ago a young gentleman was placed under our care, for what appeared at first sight hardly sufficient to create any alarm in his parents: he was a stout, healthy boy, of remarkable talents, and as active as boys of ten years of age usually are; but he had frequently complained of what he always termed a *sensation* in his left foot and leg when running about: it was described as beginning among the tendons at the upper part of the foot, and passing up the anterior part of the leg to the thigh, where it was lost. Once or twice this sensation seemed to cause him to fall down, but without any feeling of giddiness, any sickness or pain of the head or stomach. But the circumstance from which this case derived a particular interest was, that an elder brother of this young gentleman, also a child

remarkable for his extraordinary intellectual power, had been attacked precisely in the same way at the same age, and that in him the attacks soon assumed a decided epileptic character; and after causing much suffering, not without some most delusive intervals of apparent amendment, terminated his life. The case of the younger brother seems likely to be more favourable, as for some months past the peculiar sensation has not been felt. The application of leeches to the head, occasional doses of calomel and jalap, and the frequent use of the shower-bath, with the strictest attention to the quality and quantity of his diet, have apparently had the best effects, and may possibly have prevented the accession of a disorder which would have been at least not very tractable, if not altogether incurable.

M. Portal alludes to the cases in which the symptoms are exceedingly trifling, but nevertheless truly epileptic, in the work before us.

‘Tissot speaks of a child which had an hundred epileptic seizures in a day, that is to say, they were almost constant; and Benivenius speaks of many slight paroxysms occurring in one day. I had an opportunity of observing this in a lady who continued for a long time to mix in society: in her, the loss of consciousness was of such short continuance, that she often seemed merely to be hesitating for a word, and her countenance immediately recovered its serenity, as if she had only been considering what reply to make to what was addressed to her. This lady eventually became subject to the most violent attacks of epilepsy. I occasionally see her, but without the power of relieving her. One of her uncles died of apoplexy, after having been long affected with epilepsy, of which the first attacks were very slight.

‘A young female, subject to epilepsy, and whose case is mentioned by Benivenius, had no foaming at the mouth during the attacks, and did not fall down, but remained in the attitude in which the fits came on: her head was moved from one side to the other with great rapidity, and at such times she neither saw nor heard; the paroxysms were very short, but during their continuance she was quite unconscious of what passed.

‘Great care is consequently necessary to prevent mistake on account of the apparently trifling nature of the symptoms. I have seen serious faults committed, in houses of consequence, on this subject, in cases where several physicians were called in, and those were heard with the greatest favour who decided that the case was *not* epilepsy, but merely a slight disorder of the nerves; the consequence of which was, the neglect of proper means of cure until the disease became too fixed and severe to be overcome.’—P. 142.

From the lightest forms of the malady above mentioned, to the most violent and general invasion of epileptic spasm, the gradations are of course almost innumerable: in some patients

the limbs are chiefly affected, in some only the trunk of the body; in some the head is violently agitated, and the trunk motionless; in some the involuntary and mixed muscles are most affected, as the diaphragm, the heart, or the muscular fibres of the intestinal canal; in some patients respiration is suspended for a considerable space of time, and the face and lips become blue; the eyes are often shockingly agitated. Cases are related by many authors in which the muscles have been ruptured, and the joints dislocated during the paroxysms. The duration of the paroxysms is equally variable. Some patients continue many hours, and even two or three days, in a state in which if the spasms are occasionally relaxed, it is only to be renewed with equal or with greater force; and we scarcely know a more painful spectacle than that of a patient thus affected,—the paleness of the face, the copious perspirations, the groans, and many other symptoms, expressing the distress and fatigue produced by involuntary motions which continue to recur, uncontrollable by the will of the sufferer, or the art of the bystanders. The termination of the paroxysm is often singularly abrupt; but the greater number of patients feel for many hours the effects of the violent struggle through which they have passed.

Although we certainly doubt the general indication by the *symptoms* of the seat of the *cause* of the epilepsy, and are disposed to think that in many cases where there are pains in parts of the body remote from the head, local treatment directed to the seat of such pains has no effect on the general disorder; yet we find many highly interesting facts in that section of M. Portal's work which relates to sympathetic epilepsy, or such as is occasioned by local irritations apart from the brain. The following are worthy of quotation:—

‘ Many years ago I was consulted, together with MM. Malonet, a celebrated physician in Paris, and Cosme, surgeon to the Hôtel-Dieu, concerning a patient who had been wounded some years before in the anterior region of the neck and upper part of the chest, by a pistol loaded with small-shot. Many shots were extracted by slight and almost cutaneous incisions, and for six weeks after receiving the wound he went on very well; but after that period he experienced many attacks of convulsion, with loss of consciousness, and generally when he took any solid food; but for some time before I saw him the attacks did not come on during the time of eating, but some time afterwards. The most accurate examination did not discover any hardness indicative of a foreign body. Warm baths were ordered, an emollient poultice round the neck, a blister to the left arm, sinapisms to the feet, anodyne and demulcent drinks, wild valerian, &c. &c. We afterwards learnt that these measures had been ineffectual; and the patient having

returned to Paris at a later period, informed us that an abscess had formed in the left side of his neck, at the lower part, near the humeral extremity of the clavicle, and that a shot had been discharged through it, since which time he had had no return of epilepsy. And this case reminds me of that related by Fizes, formerly a celebrated professor and practitioner at Montpellier, in his lectures on epilepsy. A soldier had been subject to epilepsy since the time when he was wounded by the point of a sword in the outer angle of his eye. The attacks were ushered in by pains in that part. This physician desired that the part should be carefully examined by a surgeon, and a hard and painful tumour was felt, which being cut into, the point of the sword by which the wound had been inflicted was extracted from it, and the patient radically cured.

Another and a memorable example of a cure of epilepsy, effected by the efforts of nature, was communicated to me by M. Ribes, whose anatomical and medical knowledge is well known. At the battle of Mont Saint Jean a soldier received a musket-ball in the upper part of his head; it penetrated the cranium, and was lost in the brain: the wounded man fell down insensible, and after a time revived; but soon afterwards he was attacked with epilepsy. The paroxysms returned, notwithstanding the patient's being very attentive to regimen; and at last a hard body was perceived at the bottom of the wound. Attempts were made to extract it, but were always attended with convulsions. The cure was consequently abandoned of necessity to nature; and by and by the opening of the bone was found to be enlarged, and the foreign substance to be advanced to it. At last, seven years after the accident, the ball was entirely pushed from the interior to the exterior of the cranium; and up to the time when this case was communicated, two years after the extrusion of the ball, there has been no attack of epilepsy.—P. 156.

Several other cases are alluded to, in which the attacks being preceded by local pains, the division of a nerve, or the application of a ligature, were serviceable; but these would present no novelty to most of our readers. M. Portal also says, that he has in many instances succeeded in preventing the paroxysms by applying a liniment to the seat of pain,—a solution of ammonia with laudanum.

In the long section on the Causes of Epilepsy, M. Portal has made an enumeration of almost every circumstance or state of the human body which ever conduced, or was supposed to conduce, to the development of the disease; including some which, if not entirely fanciful, are at least very rare: and he has omitted to speak of mental impressions, although we have seen unquestionable instances of the disease first appearing after some sudden shock of that kind. The father of a nobleman now living left his country-seat to spend a day in London, his eldest son remaining in the country: at midnight his son died very unexpectedly: a

messenger was despatched to the father, who immediately returned. On his journey home, he was observed to make violent and ineffectual efforts to speak, and an epileptic fit followed. Partial loss of power of motion was felt for some time; and during the remainder of his life he was subject to attacks of epilepsy, to which he had been an utter stranger before the circumstance above mentioned.

The prognosis of epilepsy must of course depend almost wholly on the cause from which the disorder springs. The more evident the cause (except in cases of mal-formation), generally speaking, the better chance is there of cure; and symptomatic epilepsy is therefore justly said to be more curable than what is called idiopathic epilepsy. No cases afford so little ground of hope as those in which some other disorder exists of a nature to indicate an affection of the cerebrum; as, for instance, when epilepsy is combined with any form of mania. Nor is it at all difficult to determine that our hope is diminished in proportion as the intellectual powers of the patient are affected by a continuance of the disorder. We imagine that the circumstance of the dependence of the malady on an imperfect performance of the functions of the uterus may be considered as an encouragement to a favourable prognosis. We mention the circumstance chiefly for the sake of observing, that this connexion is often undoubted when it is by no means obvious; and that the intervals of the paroxysms, which at first appear to be irregular, will be found, if compared together in a continued series, to observe certain laws of periodicity. The observation of Hippocrates—*Comitiales morbi, aut convulsiones epileptica, quibus ante pubertatem eveniunt, curationem recipiunt: at quibus ea eveniunt vigesimo quinto ætatis anno, maximam partem committuntur*—is no doubt for the most part correct; in young subjects epilepsy often either depends on causes which are easily removed, or is removed at the age of puberty; and if not removed at that age, or if it occurs at a later period, few diseases are less manageable. Yet Portal cites the case of Léoniceni, a famous Italian physician mentioned by Tissot, who was for thirty years subject to epilepsy, and then becoming free from the complaint, without any very evident reason, lived to be a hundred years old. The author before us also warns practitioners not to mistake a simple epileptic attack for a true epilepsy of many paroxysms; as many patients never have more than one attack, and are happily cured. We do not see the disadvantage of the error, if error it can be called; for the treatment must be precisely the same, and we can never say after one attack that others will not follow; and the prognostication that the paroxysm would

prove solitary would in any case be imprudent. If the respiration continue free during the attack, the state of the patient is considered to be more promising than if the contrary is the case.

The variety of forms in which epilepsy may appear, the different ages in which it may occur, the numerous causes on which it may depend, have of course led to a wide variety in the remedial means which have been employed. In no disease have specifics, and those of the most violent kind, been more frequently, more boldly, or, we venture to say, more disadvantageously employed. That there are cases in which the nitrate of silver, the oxide of zinc, the oil of turpentine, and other medicines, are of the highest efficacy, is quite beyond doubt; but the manner in which these medicines act may truly be said to be unknown so long as we see them pushed to the greatest excess without effect. We know the most deplorable instances of disfigurement from the nitrate of silver in individuals who have derived no equivalent advantage from the medicine: and we fear that zinc and turpentine much more frequently fail than succeed. It is for this reason that an investigation into the causes of epilepsy becomes so interesting. The first business of a practitioner whose ambition is of too high a character to be satisfied with accidental success, and whose principles place him above the tricks of a trade, is to make a most patient examination into all circumstances connected with the health and life of a patient affected with so distressing a malady as epilepsy; such an examination as is not to be made at one interview, or in a very short space of time; and if he does this, although he may achieve little at first, his chance of final victory will be very much increased.

During the continuance of the paroxysms of epilepsy, little can be done with good effect, and perhaps the less we do the better. Bleeding, which has been advised, is seldom easily performed; and, except where we apprehend an apoplectic termination, would be attended with no particular advantage. The attempts which have sometimes been made to shorten a paroxysm, by forcibly extending the thumbs, or violently opening the mouth, can seldom have been serviceable: indeed, the chief care required is to guard the patient from injury. M. Portal advises, that in the intervals between the convulsions, a few spoonful of orange-flower water, or a small quantity of volatile alkali should be administered: he also says, that he sometimes prescribes a little oxymel, in order to render the saliva more fluid, and more easily discharged. It is probable that clysters of oil of turpentine, if they could conveniently be given, would sometimes abbreviate the dura-

tion of the attacks. We have in some instances fancied the paroxysms were put off in consequence of the administration of an emetic; and in other cases a full dose of opium has seemed to have the same effect. In the instance of an individual lately communicated to us, the paroxysms are invariably *postponed* by the introduction of a large piece of salt into the patient's mouth. The patient is a retired officer, and has had successful recourse to this expedient a great many times during the last nine years. The disease, however, is no other way affected by it.

Whether the malady is idiopathic or sympathetic, two circumstances are always present in it; a high degree of nervous agitation, and a disturbed or morbid state of the circulation within the brain. Local congestion or plethora is perhaps the general character of this latter state, as is sufficiently shewn by the phenomena during the fits, and by the accidents shewn by dissection to have taken place when the paroxysm has been fatal. The general propriety, therefore, of bleeding, cupping, and the application of leeches, cannot be questioned; but even these plain measures will not admit of indiscriminate or immoderate application. The compendious notion entertained by Dr. Fordyce, if we remember rightly, that we had only to reduce our patient if he was plethoric, and to strengthen him if he was weak, can only be admitted with a reservation in favour of those cases in which plethora and debility are united. In every case of epilepsy, however, one part of our treatment must be directed to lessening the circulation within the cranium; for this we have it in our power to do whether we can reach the irritation which causes the undue circulation or not. But in endeavouring to effect this indication, we possess an important means in diminishing the patient's diet, and administering such medicines as cause a considerable derivation to the intestinal canal: and we are convinced that depletory measures must nevertheless be sometimes combined with a general tonic plan of treatment. Wherever there is a distinct source of irritation, that must of course be removed. On the subject of blisters, M. Portal indulges in a great deal of very fanciful reasoning: their utility is unquestionable: the irritation arising from the external use of tartar emetic is also frequently useful; but we have seen by far the most decided good effects arise from the establishment of a seton; and Portal speaks very highly of this measure: he frequently advises the seton to be made where any pain is felt constantly affecting some part of the body before the paroxysm. The actual cautery, so much spoken of by the ancients, is also frequently, and it is said advantageously, resorted to in French

practice : it is sometimes applied to the extremities, but more commonly to the back of the neck, as advised by Celsus, or to some part of the spinal column. With similar intentions, and with equal success, the moxa is very commonly applied ; and M. Portal considers it preferable to the cautery, where the object is to procure a prompt and considerable discharge. He speaks with some favour of cold bathing, and with more of the warm-bath. The first we should consider a remedy of very doubtful propriety ; and we confess to have acquired a very strong prejudice against the warm-bath, in cases of severe spasm, from witnessing a fatal effect apparently produced by it, following close on complete relief of the spasmodic affection. The shower-bath does not seem to have been tried by M. Portal, although often of service in these cases. Sea-bathing in the summer season may often be admissible.

A very long list of medicines has been made by M. Portal, most of which may be serviceable in particular circumstances, but which have often been employed with little or no discrimination. Among these is the valerian, which is perhaps less frequently tried than it deserves to be, since it possesses a very evident property of allaying nervous excitement. Digitalis has often been considerably serviceable, but its good effects can hardly be supposed ever to be permanent. The mistletoe of the oak, like many other medicines, seems to have been chiefly employed with superstitious motives. With almost similar views, the producing of disgust or terror has sometimes been resorted to ; for such must have been the effect of ordering the patient to eat part of a tame cat, or the brains of vultures, or human liver, or that of a weasel, or the skull of an ass, or the rasped and pounded skull of a suicide, or the fresh blood of a dying gladiator, ' butchered to make a Roman holiday.' Such horrible practices are now, we trust, utterly unknown in civilised nations.

Bark seems to have been sometimes advised in epilepsy as an antispasmodic, but probably often as a tonic. Arsenic has also often been employed ; and this, as well as the last-named medicine, has occasionally been prescribed on account of a supposed intermittent character of the disease. The leaves of the citrus aurantium enjoy some reputation for their antispasmodic properties on the continent. We have heard very singular testimony concerning the efficacy of the cardamines flores. In one of the most severe examples of epilepsy which we ever witnessed, and in a case in which the patient had been for many years subject to the disorder, against which every means seemed to have been employed in vain, the tincture of colchicum produced, or seemed to produce, the most striking good effects. The patient began by taking a few

drops, and the dose was never increased, we think, beyond two drachms, taken twice a day; but during the use of the medicine, the paroxysms of the malady gradually diminished in frequency and violence, and were then wholly suspended for about twelve months. We regret to learn, however, that the disorder has returned, and that the same good effects have not yet followed the use of the same medicine. The wild narcissus is regarded by the French practitioners as possessing considerable antispasmodic and narcotic properties. With respect to opium, hyoscyamus, and other narcotics, their effects are sufficiently well known to make it evident that there may be many cases of epilepsy in which they can be employed with some advantage. Assafoetida, although possessed of valuable antispasmodic properties, does not enjoy a very high reputation in epilepsy; the musk ranks somewhat higher: garlic has occasionally been extolled. Cantharides have sometimes been employed, but M. Portal thinks them too dangerous a remedy to be recommended. The oil of turpentine is of singular efficacy in cases dependent on uterine irregularity.

The principal remedies on which any reliance has been placed, against the severe and intractable malady in question, are, however, of a metallic nature. Many metals have been used, but those which have enjoyed the greatest reputation are, copper in the form of sulphate and ammoniate, the oxide of zinc, and the nitrate of silver. The first and second, although valuable in some other spasmodic affections, and perhaps particularly so in chorea, are not, we think, now often depended on in epilepsy; and the third, although of great power in some forms of the complaint, has often been pushed to a great excess in vain. It seems necessary to give it in considerable doses in order to obtain its good effects in any case; but the means of discriminating the cases in which it is most likely to be used with benefit have, we fear, not yet been conferred on the profession. There are certainly some cases in which the disorder is aggravated by its employment. M. Portal does not appear to have prescribed it often; and he imagines its efficacy to depend on its power to dislodge mucous and other matter from the bowels, as well as on its acting on the kidneys and the skin.

Among the innumerable remedies which have been from time to time employed, carbonic acid gas is mentioned by M. Portal; and he thinks it was from some theory connected with its benefit, that certain practitioners in his country advised their epileptic patients to live in cow-stables. He does not say any thing in praise of this practice. It is time, however, to close these desultory observations, which have taken

their present form from the perusal of M. Portal's catalogue of medicines, or rather those historical details of which the greater part of his book consists, and which, as he very justly remarks when concluding them, prove that mankind, in seeking a remedy for their evils, and particularly for epilepsy, which they considered no less dangerous than degrading to their nature, seem only to have consulted their extreme desire of obtaining relief, without exercising those powers of reason by which they would have learnt the inutility and even the absurdity and the danger of most of them.

As a book of reference, M. Portal's observations may be worth the notice of English practitioners: it is well written, and with more judgment than its too great size gives a promise of.

II.

MORBID SENSIBILITY OF THE STOMACH AND BOWELS.

An Essay on Morbid Sensibility of the Stomach and Bowels, as the proximate Cause or characteristic Condition of Indigestion, Nervous Irritability, Mental Despondency, Hypochondriasis, &c. &c. To which are added, Observations on the Diseases and Regimen of Invalids on their Return from Hot and Unhealthy Climates. By JAMES JOHNSON, M.D., of the Royal College of Physicians, and Physician to his Royal Highness the Duke of Clarence, &c. &c. Second Edition. 8vo. pp. 157. London, 1827, Underwoods.

THE rapidity with which three editions of this little work have appeared, renders any opinion of ours concerning it almost as superfluous as it is tardily given. It is one of those favoured productions which general readers have purchased with avidity; and we doubt not that the author has found the effects of this in more ways than one. A treatise on the gout or the stone interests but a small part of the public; the most laboured investigation into diseases of the heart proves only interesting to a few unhappy individuals; the most acute and able observations on fever seldom attract the attention of persons out of the profession. But all works which treat of indigestion, or of diet, or of bilious and nervous disorders, affect the whole of the reading world: whatever may have been men's early habits, or whatever may be their station and duty, very few attain to the age of forty without some indications of a stomach less obedient than it was, or of bowels, the tranquillity of which Dr. Paley has justly enumerated among the valuable blessings of this life, participating in the irritability of the stomach. The man of rank ruins his health by self-indulgence; the man of business

by labour and long fasting ; the professional man by anxiety ; the scholar by neglect of exercise ; the man of pleasure by negligence ; and in all these persons the first symptoms of suffering are generally felt in some interruption or disturbance of their powers of digestion : they cannot eat what they used to eat, they cannot bear wine so readily, they cannot read after dinner, and the most uneasy feelings usurp the hours of sleep. In the parks or on the parade, in the senate or in the courts of law, in the peaceful quadrangles of Cambridge and Oxford, or in the hunting field, in the offices of merchants or among farmers and shopkeepers, — nine men in every ten, who are not very young, will tell you that they suffer under some of the many forms of indigestion. The consequence of this is, a great temptation to compose books on a subject which so comes home to all men ; and many trifling works have from time to time appeared, to the great detriment of dyspeptics, and the abundant vexation of practitioners. Within the last few years, works of a much higher character have been written in this department of medical observation : the merits of Dr. Philip's are sufficiently known both to the profession and the public : the experiments of Magendie, and, more recently, of Gmelin and Tiedemann, have corrected many errors regarding digestion : Dr. Paris's Treatise on Diet, although certainly not abounding in references to writers from whom the author has sometimes borrowed very largely with the scissors, is a sensible and useful production : and, lastly, the essay before us, although too kind to the public in the matter of *formulae*, is the work of a gentleman who has evidently written after very long observation of the comprehensive disease of which he treats.

Former writers on the affections which are the subject of the present essay, have for the most part spoken of them as parts or consequences of indigestion ; and certainly many of them often follow in the train of that disorder. But it is still true, that many of the affections often exist without any palpable failure in the digestive powers of the stomach, and separate from many of the common symptoms comprehended under the denomination of dyspepsia. As for the term *bilious* disorder, it has seldom been used of late years, unless for the purpose of explanation, but by those contemptible writers whose motives were sufficiently apparent. The term *mimoses*, employed by Dr. Marshall Hall, though not inexpressive, had the constant disadvantage of conveying no clear idea to readers in general : and, altogether, we do not see how this 'abstract of all maladies,' which is here viewed as the 'proximate cause or characteristic condition of indigestion, nervous irritability, mental despondency, hypochondriasis, &c. &c.' could have

been any better expressed than by a kind of periphrasis, such as that employed in the title-page to the present work.

In a state of health, the stomach will bear considerable variations in the quality of the substances conveyed into it, without any symptoms of uneasiness, or any gastric sensation being excited, although the general system may feel a very decided influence or excitement from such substances. Substances of a deleterious nature, on the other hand, will produce the most distressing effects on the heart, brain, and general system, apparently through their effect on the nerves of the stomach, but often without rousing the sensibilities of the stomach itself. These circumstances being premised, it is not only readily understood that when the stomach is *not* in a state of health, the application of the food from which pleasurable feelings of a general kind have been, in ordinary circumstances, diffused over the frame, is followed by uneasiness of stomach, imperfect digestion, and general distress,—but also that many general symptoms may arise from causes of irritability within the stomach or intestines, attended with no specific sensation *in* the stomach or in the intestines. On these observations, which are supported by his experience, and apparently confirmed by analogy, Dr. Johnson founds a division of the cases of morbid sensibility of the gastric and intestinal nerves into two classes: one, in which there is *sensible* pain, irritation, or other disorder in those organs; and one in which there is *not* sensible pain and irritation in the stomach or bowels; both classes being characterised by various sympathetic affections, mental and corporeal, which in the first class plainly follow the local irritability, and in the second arise from the same irritability, although the irritability is masked. We at once see the danger of admitting a non-apparent cause as one really existing, and how erroneously the principle may be applied; but we yet believe Dr. Johnson's division to be just, and his remarks practically important. In proceeding to illustrate both these classes of disorder, Dr. Johnson first describes the common symptoms of indigestion; and as they very well illustrate the sympathies of the stomach, we shall insert his description.

‘At a certain period, varying from half an hour to two hours, after food, more especially after dinner, but often after breakfast or tea, the individual experiences a sense of uncomfortable fulness in the stomach. Of all symptoms, this is the most common and the most constant. It increases during the progress of imperfect digestion, and evidently depends on the swelling of the food in the stomach, or the disengagement of air or gas. It is often accompanied by a sense of weight, and also constriction, as if the clothes were too tight round the body. Females are then glad to unloose

their stays, which gives a temporary relief. Heartburn is not an unfrequent sequence; and then discharges of air and acid, the latter burning the throat, and causing a very uneasy sensation from the cardiac orifice of the stomach up to the palate. The eructations are often very *rancid*, especially if oily or fat food have been taken. A feeling of disgust, or even nausea, not unfrequently takes place; and where the nerves of the stomach are in a very irritable state, vomiting of half-digested aliment occurs. In some people there is even a sense of tightness in the chest, impeding the free action of breathing, partly depending on the distension of the stomach. Headach, giddiness, faintness, are occasional attendants on this state of the stomach. When the organ is thus distended, there is not only tenderness on the least pressure at the pit of the stomach, but often actual pain there, till the organ is evacuated either by vomiting, or by the completion of the first digestion.

‘Some or many of these symptoms continue to distress the individual for several hours; and even when the food has passed, in a more or less digested state, into the duodenum, the individual is harassed with flatulence and most uncomfortable distension in the bowels. In many cases, indeed, the duodenum is even more morbidly sensible than the stomach, and during the passage of the food through that organ, the sufferings are far more tormenting than during the digestion in the stomach. This is not at all wonderful, when we consider that it is into this bowel the bile is first poured, and that the bile is generally depraved in this class of complaints.

‘After a long and painful digestion then, and passage of the chyme along the upper bowels, there is either an irritable or torpid state of the colon to be contended with. Very many are unable to get free evacuations without assistance; while others are teased with several inefficient motions, a sense of something left behind being still felt. In such cases, the motions are rarely natural and formed, being generally of various colours and consistences, from white to jet black, forming a heterogeneous mixture of slime, bile, glairy mucus, lumps, or a pultaceous mass like yeast, exhaling a most unnatural odour.

‘It is a curious fact, that, when the above-mentioned symptoms are strongly marked, and very distressing in the stomach and bowels, the sympathetic effects on remote parts of the body, and also on the mind, are far less than where there is merely morbid sensibility in the first passages, attended with few of the phenomena described as indicating what is called indigestion. But more of this hereafter.

‘When the digestion is finished, and the *fæcal* remains discharged, the dyspeptic patient has often an interval of comparative comfort, till the same train of symptoms is renewed the next day. But too often the sleep is disturbed with harassing dreams or night-mare, and the individual rises in the morning quite unrefreshed, with smarting eyes, thickly coated tongue, bitter taste in the mouth, languor, irritability, despondency, and no relish for breakfast.’

This is a pretty faithful description of the feelings of the dyspeptic patient; and it is equally true that the sympathetic effects hereafter to be spoken of, and which are even more distressing than those just enumerated, are the severest in individuals who feel few or none of these marked and not-to-be-mistaken symptoms of disordered stomach and bowels,—a circumstance which of course often conceals, for a length of time, the real origin of their sufferings, and precludes a felicitous system of treatment. In the cases furnishing the colouring of the above extract, it is very evident that the sensibility of the intestinal canal is what may very properly be termed morbid; and such is its character in all cases in which the processes of digestion are *felt* to be going on. A combination of an affection of the liver with the above disorder is very frequent, and is often indicated by a great desire for food, which cannot be comfortably digested after it is taken. We much approve of Dr. Johnson's reprehension of the indiscriminate practice of giving repeated doses of calomel and black draught in these instances: the most obstinate chronic cases met with in practice are such as have been thus dealt with: the patients find immediate relief from these means, and are with much difficulty dissuaded from the frequent use of mercurial medicines in particular; the abuse of which does, we cannot doubt, materially add to their sufferings in the subsequent stages of the complaint.

‘Indeed, the usual routine of calomel at night, and black draught in the morning, if too often repeated, will keep up rather than allay irritation in the bowels, and produce, as long as they are continued, morbid secretions from the liver and whole intestinal canal. It is astonishing how long scybala and irritating undigested matters will lurk in the cells of the colon, notwithstanding daily purgation. Many instances have come to my knowledge, where portions of substances, eaten two, three, and four months previously, have at length come away in little round balls, enveloped with layers of inspissated secretions. These scybala keep up an *irritation*, generally without any distinct pain, in the bowels, and the effects of this irritation are manifested in distant parts by the most strange and anomalous sensations, that appear to have no connexion with the original cause. The practitioner is thrown off his guard by the belief that, after repeated cathartics which scour the bowels, there cannot be any thing left there. But this is a great mistake. It is not the most energetic purgative that clears the bowels most effectually. If irritation be first allayed by hyoscyamus or other anodyne, and then a mild cathartic exhibited, the evacuations will be much more copious than if the most drastic medicines were exhibited without previous preparation.’

Conjoined with the sensations of dyspepsia are frequent fits of mental irritation or despondency. We are perhaps less

disposed than Dr. Johnson to attribute these to the presence of tenacious andropy bile, though we would not deny its occasional production by such a depraved secretion: the appearance of the eye and of the skin become indicative of disease, emaciation takes place, and the strength declines: the former, our author observes, is almost an invariable accompaniment of disturbance of the functions of the liver, whilst it is not seen even in severe cases of simple dyspepsia: loss of strength, on the other hand, is generally complained of by the dyspeptic; and the complaint appears to be founded rather on a distressing sense of weakness than on real debility; it is occasioned by irritation of the intestinal canal, and not relieved by those means which relieve real debility. Pains of parts remote from the stomach very frequently add to the distress of the patient: these most commonly perhaps affect the head; but the limbs may be so affected as for the complaint to simulate the character of rheumatism: in the worst cases, pain of the most violent description is thus produced, as in some examples of *tic douloureux*; and every form of nervous disorder, up to epilepsy or mania, may grow out of the same diseased origin. After a time, the secondary irritations are heightened into distinct diseases, far more formidable than the primary affection, the symptoms of which have either disappeared, or seem to be lost in the serious consequences which have ensued.

We have hitherto spoken only of those cases in which the *sensible* disturbance of the stomach or bowels was well defined; in passing on to those in which the *effects* only of this disturbance, or of this morbid sensibility, are the most prominent parts of the malady, we must give the author's explanation in his own words:—

‘I have, in several parts of this essay, observed, that the sensibility of the internal surfaces of the stomach and bowels, or, in other words, of the ganglionic nerves, is not the common sensibility of the skin, since they are insensible to the touch or to the application of common substances; although they are endowed with a most acute sensibility of their own, which is termed their organic sensibility. This peculiar sensibility may be excited to such a degree as to occasion convulsions, tetanus, and even death, without our being conscious of any sensation in those parts themselves. Thus a small worm, an *ascaris*, will so offend the organic sensibility of the intestinal nerves, as to cause epileptic fits, or general convulsions. A hundred medicinal substances will affect the whole frame, in a hundred different ways, when applied to these surfaces, and all without any consciousness, on our part, of irritation there. In short, we can only become acquainted with the operation of medicines, articles of diet, or other agents, on these surfaces, by observing their effects elsewhere—not by the sensations they produce

in the parts themselves. Tartar emetic is a familiar instance. The heart, the brain, the nerves, the muscles, the glands, the mind itself—all will be powerfully affected by the application of a few grains of this medicine to the stomach, while not the slightest sensation is felt in the organ to which it is first applied. If, indeed, we apply to this organ substances of so acrid or pungent a nature as to produce pain or other unpleasant sensation there, we change the organic into sensible excitability, or we exalt the low degree of common sensibility, and thus offer dangerous violence to the parts; but all below this act, without our knowledge. And it is very curious, as before observed, that when this conscious pain or other sensation is excited in the stomach or bowels, there is less effect, in general, produced on the other parts of the machine. Can we wonder after this, that the great majority of those effects which we feel in different parts of the body, from sympathy with the stomach and bowels, are unattended with any *sensible* operation or excitation in those organs themselves?

The causes of this morbid sensibility are physical and moral. Among the former are many circumstances which are almost unavoidable in a residence in large cities or close towns, such as the impurity of the atmosphere and an unhealthy state of the surface of the body, which soon influences the state of the stomach, impairing the usual appetite, and thus leading to a second description of causes in the stimulating food and drink to which individuals so situated have habitual recourse: to these causes are also to be added the mental perturbations to which the residents of cities are exposed. But we rather doubt the bad effects of the increased mental exertion and excitement felt by those who live in the bustle of the world, or at least do not believe them to be more detrimental to health than the inaction consequent on a quiet residence in the country. The most perfect examples of morbid sensibility of the stomach and bowels are to be found in the comfortable personages of the country, whose full living, deficient exercise, and a state of mind seldom many degrees above sleep, combine to create dyspepsia and hypochondriasis in shapes more horrible than ever, we venture to say, haunted the stomach and imagination of any man in the full exercise of his mental faculties in the midst of London. With respect to diet, it seems that Dr. Johnson has been very much misunderstood. We do not wonder at this, however, for, proceeding on the principle that whatever in diet produces discomfort of body, or irritability or despondency of mind, and arguing that the daily and habitual practices of towns are directly productive of these effects, the rule he lays down to avoid both animal or vegetable food, and to prefer the farinaceous, has assuredly an air of very unattractive generality. Indeed, we may perhaps venture to question the rule

in many instances, and should be justified in so doing by what we have ourselves observed in some instances in which the patients had been put upon this plan; that is, had been persuaded to leave off one article of food after another, until they brought their diet down to the point of *comfortable*: this point, in aggravated cases, is very low indeed, and certainly nearly as low as *water gruel*. But has it not occurred to Dr. Johnson, as it certainly has to us, to find the comfort thus obtained very partial, and actually attended with a great increase of irritability and nervous suffering, even where the digestion seemed to go on far better than before? It is in cases of this kind that we are rather inclined to keep our patient up to a better diet by the help of medicine, than to reduce him to one under which few men, accustomed to live pretty well, could possibly enjoy, for any time, either health or strength. The object, doubtless, is to enable the patient to partake of any kind of food in reasonable quantity, and of wine with the same restriction; and the only question is, of course, about the means. But if Dr. Johnson is not guilty of recommending the people of England to live wholly upon gruel, he certainly labours under a strong suspicion of giving another piece of advice which in the 'Palace of Wines' would have doomed him to very summary punishment; we mean, that of removing not spirits alone, but wine and even table-beer, and drinking only water. Such is surely the meaning of this passage:—

'In respect to drink, water is the only fluid which does not possess irritating, or, at least, stimulating qualities—and in proportion as we rise on the scale of potation, from table beer to ardent spirits, in the same ratio we *educate* the stomach and bowels for that state of morbid sensibility, which, in civilised life, will sooner or later supervene.'

We beg leave to demur to this; not out of a pure hostility to water, but because we really believe that all those pleasant beverages which Providence has allowed us to extract from various sources, are intended to be partaken of to cheer us after labour, to enliven us a little when depressed; and, in various climates and seasons, by their various qualities, to refresh or invigorate us. It is very true, that excess in any of these luxuries is surely punished, and that it must be checked if we would preserve our bodies in health and comfort: but we maintain that the body is not in a state of health when these good things of life cannot be even moderately partaken of; and that the object of our treatment should not be merely to cure by removal of such articles of diet, but to restore the capability of being advantaged by them. There is nothing of which we live in greater dread than men of a

remorseless system of dietetics ; for we have already often said, and we now repeat, that we never find a man whose mind has become habituated to a system of this kind, who has not at the same time lost much of his moral feelings, and become to a great extent absorbed in an intense selfishness. With much deference to Dr. Johnson, whose great information, large experience, and well-known candour, entitle him to the respect he so fully enjoys, we cannot concede that even the *causes* of morbid sensibility can at all times be departed from consistently with the duty of reasonable beings in society : and if we are to desert the butcher, fishmonger, gardener, and baker, and live upon gruel,—then we must extend the same principle to the moral causes, and give up all occasions of mental excitement or depression, rejoice no more with any one, be anxious for nobody, grieve with none :—it is unnecessary to say that this would be improper, when in truth it would be impracticable. We are born to be active, and so constituted that no possible earthly state, though ever so pleasant in itself, can give us permanent satisfaction. We are glad to fly from petty cares to noble excitements : if placed beyond want, we struggle and contend for distinction ; if distinguished, we aim at power ; if power is ours, we grasp at immortality. And to do all this, and to endure anxious days and some sleepless nights ; and to enjoy the alternation of solitude and society, and to possess the power of continuing to improve our minds, and to be useful in our generation, are the only real objects worthy of our care. We must not wholly shrink even from suffering, with these objects in view : if the mind is pained, we must control our thoughts ; if the body suffers, we must fly to needful medicine, and review our diet, but by no means retreat into habits incompatible with any manly or useful occupation. It has been imagined by some moralists that a certain portion of anxiety was necessary even to happiness. We dare not, in the face of Dr. Johnson, say that a certain portion of morbid sensibility of the stomach and bowels is essential to health ; but at least we think that a perpetual bodily tranquillity, if it could be preserved, would hardly be desirable, but would almost benumb and hebetise the whole system. It is one of the glorious rights of the people of this island to grumble at its climate, and irritating enough it is without doubt ; but our business is to resist all its changes, and amidst them all to preserve health : if, instead of this, we could ensure a perpetual repose of the elements, if the sun ever shone, and none but gentle breezes were ever wafted to us, we should soon find, that if there was irritation in variety, there was pestilence and death in the calm.

We are very far from maintaining, that the habits of the generality of men, or women either, as regards either diet or regimen, are rational and salutary. Neglect of exercise, injudicious apparel, excess in eating or in drinking, a carelessness about the hours of sleeping or waking, all carried far beyond what the duties and necessities of life really require, are on all sides undermining human health. Immoderate mental application, in persons leading a sedentary life, is noticed by Dr. Johnson as the principal cause of the state called hypochondriasis, a state in which he maintains there is often no indigestion, but always a morbid sensibility of the stomach and bowels; which sensibility is manifested in the depression, in the depraved sensations, and in the many fancies of the patient. In its lighter forms, there are perhaps not many individuals in this country to whom this malady is wholly a stranger; and it becomes more and more familiar to those who allow themselves to contract bad habits of mind or body. The author's opinions on the influence of morbid sensibility of the stomach and bowels in producing or aggravating this disorder, are expressed in the following passage:

' Even if the original causes be purely of a moral nature,—as, for instance, severe losses in business,—still the mental despondency is aggravated by the morbid sensibility of the stomach, and this morbid sensibility is mitigated or exasperated by the quality and quantity of our food and drink. The physician cannot cure the moral cause that preys upon the mind, and through that medium injures the body; but he can, in a great measure, prevent the reaction of the body on the mind, by which re-action the moral affliction is rendered infinitely more difficult to bear. Thus a man loses by speculation a certain sum of money, which makes a considerable impression on his mind, and depresses his spirits. After a while he finds that TIME, instead of healing the wound which misfortune had inflicted, has increased it—and that what he could look upon with some degree of fortitude in the beginning, is now become such a source of despondency, that it haunts him by day and by night, and is for ever uppermost in his thoughts, and even in his dreams. He finds, moreover, that on some days he can view the misfortune with courage, and spurn the idea of giving way under it; while, on other days, it presents itself in the most frightful colours, and he seems completely deprived of all fortitude to resist its overwhelming influence. This is a true copy, of which I have seen many originals during the late commercial distresses and ruinous speculations. What does it teach us? Why, that the moral affliction was borne with comparative ease till the digestive organs were impaired through the agency of the mind when re-action took place, and impaired, in turn, the mental energies. But how are we to account for the fact, that one day the individual will evince fortitude, and the next despair; all the attendant circum-

stances of the moral evil remaining precisely as they were? It can be generally accounted for by the occasional irritation of food or drink exasperating the morbid sensibility of the stomach, and thereby re-acting on the mind. This temporary irritation over, the mind again recovers a degree of its former serenity, till the cause is re-applied. I was led to this solution of the enigma some years ago, by observing that an aged hypochondriac was every second day affected with such an exasperation of his melancholy forebodings, that he did nothing but walk about his room, wringing his hands, and assuring his servants that the hand of death was upon him, and that he could not possibly survive more than a few hours. Under these gloomy impressions, he would refuse food and drink, and, in fact, give himself up for lost. The succeeding sun, however, would find him quite an altered man. The cloud had broken away—a ray of hope was re-kindled—and the appetite for food and drink was indulged too freely. Next morning, all would again be despair, and nothing but death could be thought of. So he went on, as regular as light and darkness. But if, on the comparatively good day, he could be kept on a very small portion of food, and two or three glasses of wine, the next would be comparatively good also. This, however, could seldom be done; for as soon as he felt a respite from his miseries, procured by one day's abstinence, he returned to his usual indulgences, and again irritated his stomach and bowels, and through them reproduced the despondency of mind. Another curious phenomenon was observed in this case, and, indeed, I have seen the same in many others; namely, that any purgative medicine, which operated at all severely, brought on an exasperation of the mental depression and irritability of temper. He was always better when the bowels were constipated—clearly shewing that whatever irritated the nerves of the alimentary canal, whether as food or as physic, increased the mental malady.

The treatment of the disorders which arise from a morbid sensibility of the stomach and bowels is spoken of by Dr. Johnson under the heads of dietetic, medicinal, and moral. On the subject of diet, and concerning the author's opinions on that part of the treatment, we have already been led to express our dissent from him; yet it is only from the uncompromising rigour of his system that we dissent; and because we think that whilst it is right to lessen, as it were, the labour of the stomach and bowels in these cases to a certain degree, it is also desirable to employ simultaneous means for raising their power: and in this view, although we quite as much disapprove of continual purging as Dr. Johnson does, we should place more reliance on medical treatment than he would seem to do. At the same time, we think when we come to speak of the medicinal part of his treatment, it will appear that his opinions on that point approach nearer to those we have advocated, than the ideas he entertains of the

efficacy of a very reduced diet had prepared us to expect. And lest we should seem desirous, in the least degree, of misrepresenting his advice concerning diet, we shall here give an extract which clearly explains in what circumstances and to what extent he means restriction to be carried.

‘ In all or any of the various forms of indigestion which have been described, then, the diet is the first thing to be regulated. But it is quite preposterous to prescribe a certain quantity, or even quality, of food and drink, till the power of the digestive organs is ascertained. I have repeatedly pointed out the criteria by which the patient, as well as the practitioner, may easily determine this important point. I care not if the dyspeptic invalid begins with a pound of beef-steaks and a bottle of Port wine for his dinner. If he feel as comfortable at the end of two, four, six, eight, or ten hours after this repast, as he did between breakfast and dinner of the preceding day, he had better continue his regimen, and throw physic to the dogs. But if, a few hours after his dinner, he feel a sense of distension in the stomach and bowels, or any of those symptoms of indigestion which have been pointed out—if he feel a languor of body, or a cloudiness of the mind—if he have a restless night—if he experience a depression of spirits, or irritability of temper next morning, his repast has been too much, or improper in kind, and he must reduce and simplify till he come to that quantity and quality of food and drink for dinner, which will produce little or no alteration in his feelings, whether of exhilaration *immediately* after dinner, or of discomfort *some hours* after this meal. This is the criterion by which the patient must judge for himself. The scale of diet must be lowered and simplified down even to water gruel, if necessary; otherwise a cure can never be expected. Speaking generally, the dyspeptic invalid may commence the trial with from four to eight ounces of plain and tender animal food, with stale bread, and few or no vegetables, at two o’clock, or as near that hour as possible, drinking, after the meal, a table-spoonful of brandy to two or three wine-glassfuls of water. If, after this, he feels light, and rather inclined to exercise or amusement than to take a nap on the sofa, he has hit the point, and to that system he should rigidly adhere. If he feel oppressed in body, or discomfited in mind, he must reduce the quantity gradually—if he feel a sense of emptiness, or faintness, or debility, he must increase the quantity of his food; but this will very seldom be necessary. If the weak brandy and water will not be taken, sherry and water, (a wine-glassful to the tumbler) may be allowed; but it is not so salutary as the former. Every thing that is taken beyond this, at dinner, is at the invalid’s own peril; and if he prefer wretched health of body and mind to the momentary gratification of sensual indulgence at table, let not the physician give his sanction to such regimen. I have distinctly said, that the invalid may eat and drink as much as he pleases, provided he experience no *increase* of his morbid feelings from food and drink within the twenty-four succeeding hours. If he *do* feel an

increase of these, the necessity of the restriction which I propose is self-evident; and so far from being the imposition of a penance, it is, in reality, the removal of one.

The plan pursued, then, by Dr. Johnson, is to bring the patient, if necessary, down to water gruel,—by which he maintains he can not only be nourished, but kept free from any increase of morbid sensibility; and in time the state of the stomach and bowels will so far have recovered, as to permit a little beef-tea to be used instead of water in making the gruel: from this the convalescent may advance to chicken, and so on to moderate good-living. We honestly confess we doubt the possibility of return in this manner, even after any length of trial; for when an individual has been accustomed for a year or more to be on the look out for uneasy sensations, two, four, six, ten, twelve, twenty-four hours after eating, and led to attribute any that occur to something, no matter what, which was taken in his food, we should fear his case was utterly desperate. If we are not warranted in this scepticism, we should still think that such cases as Dr. Johnson has described, and treated with success must be chiefly found in invalids whose lives have been spent in countries of which the habits are wholly different from our own. We are very far from advocating any thing in the shape of excess or self-indulgence. No people in the world are more to be pitied than those who, devoting their lives to great objects requiring the utmost intellectual exertion, and consequently incurring not only mental but extreme physical exhaustion, have fallen into the unhappy habit of purchasing temporary relief by means of stimulants: the excitement thus taken up beforehand must some day be repaid with interest; whilst a diet which, without being exciting, is nutritious and refreshing, will enable a man to perform the duties of any station to which his corporeal or intellectual power is at all adapted.

The just objection entertained by Dr. Johnson to the repeated use of purgative medicines in the cases which form the subject of his essay, has already been alluded to. Nine cases in ten, he contends, of common indigestion, are curable by dietetic means alone, at least in the incipient stage. For keeping up a regular evacuation of the excretory contents of the bowels, he recommends the employment, generally, of such medicines as, without disturbing the stomach, or irritating the upper bowels, promote the expulsion of the contents of the lower. Thus jalap, calomel, salts, senna, antimony, &c. though occasionally serviceable, are not to be frequently advised; the object should be rather by a combination of several kinds of aperients to produce an action along the whole tract of the intestines; and with these, to

allay irritability, the extract of hyoscyamus may be advantageously joined. Small doses of the blue-pill are usefully combined with such medicines; or, if the biliary secretion is faulty, the same pill may be given in larger doses: in some cases, even, it may be prudent to touch the mouth with mercury; but these, Dr. Johnson observes, are rather cases of hepatitis than of dyspepsia. As far as our experience goes, the liver is much too often blamed, and the mercurial plan of treatment much too often adopted in chronic affections of the stomach and bowels. A variety of false reasons are assigned for having recourse to this practice: there are perhaps some yellow streaks across the conjunctivæ, or the skin is dusky, or there is a pain below the scapula; and with no better apology than this, we know, at this present time, invalids who carry about with them the most positive assurance that they are highly bilious, or that their liver is indurated, or that they have no bile at all without taking blue-pill, followed up by a black draught. In many cases of chronic indigestion, the functions of the liver are truly inadequately performed; but we speak at present of a generalisation of which the extreme facility has recommended it to far too extensive an adoption; and of which the consequences are, on the part of the patient, an increase of many distressing symptoms, and on the part of the practitioner an ignorant satisfaction, and a heedlessness of the distinctions, causes, and proper treatment of maladies that under more skilful management would not pass, so often as they do, into a state which hardly admits of relief from any treatment.

The dandelion, in infusion, four ounces of the fresh root being infused in a pint of water, with the addition of super-tartrate of potash and a portion of ginger, is highly spoken of by Dr. Johnson in cases 'where the biliary secretion is defective.' We are sorry that in the second edition of his work he did not content himself with indicating the remedies to be employed in different circumstances, and omit the formulæ: not that we suspect him of the least wish to encourage quackery, against which, in all its forms, he has always been steadily opposed, and from which, even in the work before us, he endeavours to dissuade his readers: but we do not see the utility, and we cannot be blind to the inconvenience, of giving a formula for the administration of blue-pill, extract of colocynth, jalap, ipecacuan, tartarised antimony, scammony, rhubarb, and aloss, nor for carbonate of magnesia and Epsom salts, nor for carbonate of soda, and other ingredients in the infusion of dandelion; and we very well know that professional men of high character participate in a disapprobation of modes of direction which are not only easily abused, but

of which the imitation can seldom be other than mischievous. We should feel the duty of noticing this subject very painful, were it not for the perfect confidence we have that the principle for which we are contending is one which no one values more than the author, and that consequently his insertion of formulæ arose from his taking a different view of the subject.

When there is a great degree of sensibility in the stomach or bowels, scarcely any aperient will be borne without inconvenience; and in these cases, injections must be employed.

It is not, however, on these means alone, on diet however restricted, or on purgatives however judiciously used, that Dr. Johnson allows the whole treatment to depend. Counter-irritation, by means of a tartar emetic plaster, is very strongly recommended by him; and he employs it in the proportion of a scruple to each drachm of the Burgundy pitch: this being applied for two or three days; and he does not previously object to the application of a few leeches. Small doses of anodyne medicines are also often of much service. With respect to the vegetable bitters and tonics, he does not allow that they are serviceable, or can be employed without bad effects, before the morbid sensibility is reduced by an abstemious diet. He alludes, in this part of his work, to a medicine of unquestionable power in controlling some of the most dreadful maladies to which men are subject, and the employment of which, from his report of it, in small doses, whether it is supposed to act as a tonic, or as a sedative, or as both, seems to be attended with signal benefit in some cases of morbid sensibility. This medicine is the nitrate of silver; and Dr. Johnson seems to regard it as a means of 'allaying irritability.' We shall give insertion to his remarks upon it, taking the liberty of warning our readers against the too hasty adoption of it, or rather of enforcing the necessity of a due consideration of the precise cases in which he recommends its employment; for there is no error more common, and none so deplorable, as that of wielding without care or caution the mightiest weapons in the armoury of the *materia medica*.

'I have now to draw the attention of the profession to a medicine which I believe has never been employed in this class of diseases, but which, I apprehend, from what I have already seen, will be found a very valuable remedy. It is well known to surgeons, that the nitrate of silver is one of the most powerful means of allaying irritability, when applied externally to painful and irritable sores. It is also well known, that this medicine may be given internally to the extent of several grains daily, for months in succession, in cases of epilepsy, and that without ever producing any bad effect. Indeed, it is now almost the only remedy on which any dependence

is placed in the above-mentioned formidable complaint. My attention was first excited towards its effects on the stomach and bowels, some years ago, while exhibiting it to a young gentleman employed in a public office of this metropolis, who laboured under epilepsy, and who, at the same time, had the usual symptoms of dyspepsia, and great irritability of the stomach and bowels. Considering the latter complaint as one of minor consequence, I gave the nitrate of silver alone, beginning with half a grain thrice a day, in crumb of bread, and gradually increasing it to two grains thrice in the 24 hours, beyond which I did not carry the dose. After the first month, he had no return of the epilepsy; but the medicine was continued till the expiration of three months, when it was finally left off. He took no other medicine whatever; and in the course of the three months he was completely cured of all his dyspeptic symptoms. I was a good deal surprised at this event, and was at a loss to account for the result. But several cases have since occurred, which lead me to think—first, that epilepsy very often depends on morbid sensibility of the gastric and intestinal nerves; and, secondly, that it is by removing this morbid irritability of the alimentary canal, that the nitrate of silver sometimes cures epilepsy. We know, for instance, that convulsions and epilepsy are frequently produced by worms in the first passages, although no symptom of *sensible* irritation or pain may exist there at the time, the worms producing the phenomena above mentioned by their action on the special or organic sensibility of the parts, and thence, by sympathy, on the brain and spinal system of nerves. The removal of the worms cures the convulsions and epilepsy, by removing the cause of irritation; and the nitrate of silver very probably acts, in other cases, by lessening the sensibility of the nerves, and thereby rendering them unsusceptible of irritation. On this principle, I have administered the nitrate of silver, of late, in cases where the morbid sensibility of the gastric and intestinal nerves was produced by other causes than worms, and gave rise to other phenomena than epilepsy, and hitherto with marked advantage.

‘I am now exhibiting the same medicine, in combination with small doses of quinine, to some patients affected with obstinate dyspepsia, in that form which is more marked by the morbid sympathies of distant parts than by *apparent* disorder in the stomach and bowels themselves, and I have reason to believe that the effects will be most beneficial. In one case, indeed, that of an elderly clergyman in Sussex, who has, for some years, laboured under a number of anomalous symptoms of a very distressing nature, especially affecting the head, the organs of sense, and the powers of the mind, but in whom the stomach and bowels exhibited marks of morbid sensibility, the nitrate of silver and sulphate of quinine have been productive of the greatest relief, and I may say that he is completely cured.

‘I know too well the fallacies of medicine to hold this remedy up as a specific for removing morbid irritability of the *primæ viæ*; but I think I may safely recommend it to the notice of my professional

brethren, as an *auxiliary* in such cases, which it may be worth their while to try. It may be exhibited in the form of a pill at night, combined with any bitter or aperient extract. It will not interfere with the operation of almost any other medicine with which it is administered. Thus, half a grain of nitrate of silver, and two, three, or four of extract of rhubarb, or, if the bowels require no assistance, extract of camomile or gentian may be given every night at bed-time, and the dose gradually increased to two or three grains daily. No inconvenience can possibly result from the administration of the medicine, if not continued beyond three months at a time. But I must remark on this, as on almost every other medicine, that unless the strictest attention be paid to diet, all medicines will fail. I particularly wish to be understood as recommending the nitrate of silver only as an auxiliary in a complaint which often baffles the practitioner, and where all auxiliaries are occasionally needful. The quinine may generally be given at the same time, not in pills, but in solution.

Of the sulphate of quinine, given in small doses, Dr. Johnson speaks very favourably, and seems to think it must eventually supersede all other bitters: he gives half a grain, three times a day, in a little tincture of gentian, or other bitter, diluted. The shower-bath may be employed, although even this is not advisable, in the author's opinion, until the morbid sensibility is subdued by diet and medicine. The difference of opinion which we have taken the liberty of expressing already, extends of course to all parts of the treatment thus far, that we should ourselves endeavour by medicines, the shower-bath, exercise, and a well-ordered regimen, to bring the digestive powers up to the state of health from which they had fallen, rather than reduce the diet to a scale from which we should hardly ever hope to raise it again. This may arise from our laying too much stress on the indigestion which we conceive to be always present, whether its common symptoms are sensibly felt or not, in the cases in question; and too little on that state which Dr. Johnson maintains always to precede and cause it; as well as from the opportunities doubtless afforded in a London practice of seeing the worst cases that either the town or the country can supply. As regards the medicinal treatment, we cannot for a moment question the excellence or the success of that laid down by the author; and it would be truly visionary to dwell longer on the fancied evils of a severity in diet, to which, we venture to say, none will submit but those whose sufferings are extreme, and whose case is far more desperate than the diet itself.

The observations made by the author on the *sympathetic* affections of the disorder are very judicious. Irregular action of the heart is one of the most alarming of these; and it is

useful to keep in mind that when it *does not* arise from disease of the heart itself, the breathing is little disturbed, the expression of the countenance is not that of diseased heart, the colour of the face is not blue, and the palpitation is lessened or removed when the stomach and bowels are empty. A familiarity with the application of the stethoscope will, however, place a far more accurate diagnosis within the reach of the practitioner. Another very troublesome sympathetic affection is a false stricture of the urethra or the rectum, and the diagnosis of the false from real stricture is not always very easy : in these cases we are advised to let the stricture alone until we have tried to improve the state of the stomach and bowels.

In the section on exercise, there are some very interesting observations. The great difficulty with many patients is to furnish their vacant minds with any inducement to persevere in the practice of it; and there is perhaps no single circumstance which so much as the neglect and disuse of exercise carried to a proper extent, and in a proper way, interferes with the health of all persons placed above the necessity of mere bodily labour : this is more particularly the case with respect to walking, which is of all kinds of exercise, except in some particular diseases especially affecting the respiration, the most natural, the most general in its effects, and therefore the best. Dr. Johnson dwells, with very allowable feelings of pleasure and of gratitude, arising from the signal benefit experienced in his own person, on the many advantages combined by travelling in countries new and interesting to the invalid; and is disposed to lay much stress, though not more we think than he is warranted in doing, on the peculiar utility of the personal activity which such travelling often persuades to, and sometimes renders indispensable. The improved condition of the lungs, the increased power of the organs of digestion, and the consequent emancipation from many mental as well as bodily sufferings, was strikingly remarked by him in several examples; and we do not question that he is right in attributing part of these effects to the constant change of air. This was a favourite doctrine with the celebrated Wesley, and he certainly seemed enabled, in a great measure by this means, to defy the approach of old age up to the latest period of his life. Of these things the profession has long been well convinced; but there are often many obstacles to be overcome with respect to the patients. Complaints, which would be removed by exercise, are often urged in excuse for bodily indolence; debility, which exertion would overcome, is allowed to increase, from an unfounded notion of the impossibility of what alone would prove its cure.

remedy; and considerable mental as well as medical management is often required before this most efficacious habit of activity can be established.

We cannot conclude this interesting subject more agreeably to ourselves, or indeed more appropriately, than by reminding our readers of the beautiful language in which the general truths which we have endeavoured to advocate were laid down, two thousand years ago, by a Roman writer of consummate judgment and elegance. He tells the man in health to subject himself to all varieties,—‘*modò ruri esse, modò in urbe, sæpiùsque in agro; navigare, venari, quiescere interdum, sed frequentius se exercere*’: thus in a few words comprehending almost a volume of salutary advice, and adding, with no less brevity than truth, this excellent reason for taking it; —‘*siquidem ignavia corpus hebetat, labor firmat; illa maturam senectutem, hic longam adolescentiam reddit*.’ And in the next chapter of the same invaluable work from which this quotation is made, a part of the advice given to those who have lost the blessing of health, and wish to restore it, is equally worthy of notice: the kinds of exercise which conduce to health are enumerated,—‘*clara lectio, arma, pila, cursus, ambulatio*’; and the general rule, applicable to all kinds of exercise, is expressed with great precision:—‘*Exercitationis autem plerumque finis esse debet sudor, aut certè lassitudo, quæ citra fatigationem sit: idque ipsum, modò minùs, modò magis, faciendum est. Ac ne his quidem, athletarum exemplo, vel certa esse lex, vel immodicus labor debet*.’ It is perhaps impossible to lay down rules more judicious or more useful.

If our limits permitted it, we might notice, without fearing to exhaust the patience of the reader, the second part of Dr. Johnson’s publication, which relates to a subject on which his authority must be considered very great; namely, the *Diseases and Regimen of Invalids on their Return from Hot and Unhealthy Climates*. This part of the work, however, we are compelled to pass over without further observation, although it may be strongly recommended both to the persons whom it concerns and to those who are often called upon to treat disease in the peculiar forms it puts on in retired East Indians. The retribution of which these invalids are the subject is truly severe. Early transported from their own country; their best days spent in a land in which they had but a fugitive and mercenary interest; collecting wealth, not again to let it flow into that society from which it was drained, but to be imported to the land of their birth; and always looking to a return to that loved land with anxious hope;—at last they revisit the scene of their boyish days.

It is *then* that they become exposed, not only to the influences of a climate for which they have become unfit, but to the mortification of finding that their education has been defective, their life artificial, their rank and consequence dependent on circumstances and on a state of society which have no existence in the country to which they have been so anxious to retreat. Beset by numerous physical and moral ills, unoccupied, uninterested in almost all that gives activity and life to English society, they present a lesson of infinite value to those who are at all attracted by the hope of a speedy fortune to that remote country from which Europeans have so long returned wealthy and miserable; and furnish a consolation to those who have pursued a different but a longer path to prosperity, in countries possessed of greater political blessings; and who, if less rich and less enabled to gratify every selfish indulgence, at least enjoy that far more valued blessing of a well-ordered mind in a body which has not been forced into premature disease.

III.

ANATOMICAL HISTORY OF INFLAMMATIONS.

Histoire Anatomique des Inflammations. Par A. M. GENDRIN, Docteur en Médecine, &c. Tom. ii. Pp. 665.

IN a former Number of this Journal we gave a short review of the first volume of this work. The second volume is divided into three books, the first of which treats of the pathological anatomy of the blood-vessels, lymphatics, and lymphatic glands of the nerves, muscles, and complex structures. The second is devoted to the consideration of the changes of the fluids consequent to, or accompanying inflammation; and the last book has for its object a comparison between those alterations which originate in inflammation, and others which do not so originate. The first book contains very little, if any thing, which will not readily be recognised by the pathologist. The criteria of inflammation in these structures, as in every other, are the redness, the effusion, suppuration, &c., and the pre-existence of inflammation will be the more easily distinguished as the process itself is farther advanced. The effect of inflammation upon the fluids has been much less noticed; and with respect to the blood especially, much difference of opinion is maintained.

The most evident changes of the blood in inflammation are the buffy coat, and the cupped form of the coagulum; but though it is well known that these phenomena are exhibited

in inflammation, and more especially in the inflammation of serous membranes, their precise connexion with the inflammatory process has not been ascertained; neither can any certain deductions be drawn from them in practice. M. Ratier, in an inaugural dissertation, has referred the disposition to form a buffy coat to a sanguineous plethora, connected with a tendency to inflammation; and he states, that when a buffy coat does not form, the inflammation, if it exist at all, is very slight. With respect to the influence of the manner in which blood is drawn upon this separation, the experiments and observations of M. Ratier have led him to believe, that a large opening into the vessel is alone necessary; but that neither the kind of vessel into which the blood is received, nor the temperature, exert any effect.

M. Bellhomme, in a paper in the *Revue Médicale* for March 1824, has published rather a different opinion from this latter inference of M. Ratier; and concludes, from very numerous experiments, that a narrow vessel facilitates the formation of the buffy coat. It is at least certain, however, that in narrow vessels the buffy coat will be thicker, and consequently more manifest. But this may depend upon the surface being smaller, and not upon any real change in the tendency of the blood. Some experiments, also, of M. Gendrin give additional probability both to the influence of a narrow vessel, and to this explanation. In taking portions of the same blood into a shallow dish and a small cup, he always found the buffy coat upon the former very thin,—while upon the latter it formed a strong and tough membrane; and in cases where the buff was scarcely evident in the blood that had been drawn into the dish, the blood in the cup exhibited a thin but very manifest buffy coat.

It is, however, somewhat curious, that the tendency to form this peculiar appearance often seems to differ within a few moments. Thus, if blood be received into several small vessels, alternately the first shall exhibit it,—while, in the second, it shall be wanting; or, *vice versâ*, the second shall have it, and it shall not appear in the first. This circumstance has been very frequently remarked; but hitherto no satisfactory explanation of it has been given.

Another very remarkable appearance in inflammatory blood is the cupped form of the coagulum. So far as our observation has gone, this shape is never assumed without the presence of the buffy coat; and doubtless it is the consequence, as M. Gendrin observes, of the greater contraction of the fibrine of the blood. It is seen in all acute inflammations, whatever may be the organ attacked; but from the blood drawn in acute inflammatory rheumatism it is scarcely

ever absent. Often also in this disease the blood last drawn is the most deeply cupped; and the buffy coat is at the same time exceedingly firm and tough. In inflammatory attacks upon the chest and bowels, the emission of blood will frequently, indeed we may say generally, cause the disappearance of the disposition to eup; and, if the buffy coat remain, the surface of the coagulum is perfectly plane. In inflammatory rheumatism, particularly in that form which is called arthritis rheumatica, just the contrary occurs; and the blood often becomes more and more cupped, and the buffy coat more dense, the oftener that blood-letting is repeated.

The quantity of serum in blood drawn during the active stages of inflammation, very materially depends upon the different firmness of the coagulum, the proportion being for the most part greatest when the coagulum is firmest. It is said also to contain more albumen than in the healthy state, and less of the colouring matter of the blood.

M. Gendrin has attempted to describe the appearances of the blood in the different stages of inflammation; and he premises, that the blood drawn, under such circumstances, may be very inflammatory, or subinflammatory. In very inflammatory blood, the coagulation is rapid, the buffy coat thick, and the surface of the coagulum cupped; it is also stated that the coagulum swims in the serum, its surface being in the same plane with the surface of the serum. In this respect, however, we have never been able to notice any uniformity; nor has the different specific gravity of the coagulum appeared to bear any relation to the degree of inflammation.

The inflammatory blood exhibits the phenomena just mentioned far less distinctly than when the inflammatory action is very high, and the characters of subinflammatory blood are little more than hypothetical. The chief dependence of M. Gendrin appears to be on the less specific gravity as the distinguishing sign of inflammation. 'The subinflammatory blood,' he says, 'may be buffed; but then the surface of the coagulum is not on a level with the surface of the serum; it occupies the middle of this fluid, or even completely sinks to the bottom of the vessel. A dense and ovoid coagulum, swimming in the middle of the serum, is still a little subinflammatory; but if it sinks to the bottom, inflammation is no longer present.' Having thus explained the different appearances of blood, several examples are given of the periods in which these appearances are assumed. Much observation, however, is still required before any great dependence can be placed upon them as guides of practice. There is perhaps

no one fact more certain, than that the presence of a thick buff, and the cupped state of the coagulum, do not alone justify very active antiphlogistic treatment. Both are often assumed in diseases not only arising from great debility, but curable by powerful tonics. We have already adverted to the great tendency of blood to assume both these states in inflammatory rheumatism; and unquestionably this disease is very little benefited by active depletion. When, indeed, any vital organ is attacked, no one of common capacity would refrain from bleeding; but the loss of blood (in rheumatic inflammation of the heart, for instance,) is certainly not so serviceable as when the same organs are the seat of common inflammation. If, however, the joints are the only parts affected, our experience is most decidedly adverse to depletion, let the pulse be ever so full and firm, or the fever ever so high. The effect of blood-letting under such circumstances is to protract the disease, even should it render the pain less acute,—while the administration of purgatives in the first instance, and of bark afterwards, particularly in the form of the sulphate of quinine, very speedily removes the disease entirely, without inducing that feeble state of the system which always predisposes to relapse.

The blood may probably be more or less modified in its appearances, according to the nature and products of inflammation. The changes above noticed occur more or less whatever may be the organ inflamed, and before either suppuration or gangrene have ensued. The buffy coat in patients in whom the suppurative process is already established, is less diaphanous and softer than in simple phlegmonous inflammation: and there are occasionally two layers of buff; the uppermost soft, and resembling gelatine in its appearance; the inferior layer much firmer and denser. In an instance of empyema observed by M. Gendrin, there was a deposit of mucus in the serum similar in appearance to the mucus which is so frequently precipitated from urine.

In small-pox the blood has occasionally been so much changed that the coagulum has scarcely formed; and, in the language of Lister, the blood was so watery and putrid, that the fibrine was as fluid as the serum, '*sanguinem è brachio missum adeo aquatum putridumque esse vidi, ut fluctuaret crassamentum in vase non aliter quàm ipsum serum.*' The same appearances have been noted by Mead and Hoffman.

In order to prove that some changes are induced in the blood in persons affected with small-pox, M. Gendrin instituted some experiments upon dogs. Blood drawn at the commencement of the variolous eruption was injected into the jugular vein of one of these animals. Half an hour after

the injection, the dog was languid, hung out its tongue, and panted considerably; but in a few hours appeared to have recovered from the effects of the operation. The next day, he ate and drank well; but on the third became ill and feverish, and died in six days from an attack of pneumonia. This experiment was twice repeated with blood that had been taken away when the eruption was fully established; and both the animals died,—one on the third day, and the other on the fifth. The mucous tunics of the bronchi and intestinal canal, the peritoneum and the pleuræ, were inflamed.

The same experiments were repeated upon dogs with buffy blood taken from a woman suffering from peritonitis, and a man who had traumatic fever after lithotomy, but without any farther consequences than the languor that immediately succeeded to the operation.

From the result of these inquiries, M. Gendrin is inclined to infer, that the blood is primarily affected in small-pox, and perhaps in most other diseases. It does not appear very easy to draw any other inference; and thus we must in part return to the humoral pathology. It has indeed been frequently observed of late years, that the condition of the fluids has been too much neglected in the explanation of disease, and particularly the condition of the blood.

The experiments latterly instituted by the French physiologists have, however, abundantly proved that this fluid may be affected by substances injected into it, or at least, that through it the system generally may be excited to disease. We are, however, led farther than this point by the experiments of M. Gendrin, and are taught that blood drawn from a diseased animal, and injected into the veins of a healthy animal, may induce a fatal malady; and consequently, we must suppose, that the blood may be changed by morbid action without the direct intermixture of foreign matter.

Now the fact that the blood can undergo morbid alterations, having an injurious and even fatal effect upon the vital functions, ought certainly to induce a belief, and a practice correspondent to such belief, that any interference with the condition or quantity of the blood may, by inducing change in its composition, induce also serious disease. In making this remark, we particularly allude to the wholesale blood-letting that is now so generally and so indiscriminately practised. By many persons venesection is regarded as a remedy which can do no harm if it does no good; it is at least innocent. We once even heard it asserted by a physician of deserved repute, that the fear of blood-letting is absurd, because blood is so very rapidly made by the animal system. If, however, any reliance can be placed upon the observations

above alluded to, we may fear, that though the same quantity may be reproduced, its quality will be very much altered; and this is even visible in some cases, for, by repeated venesection, the proportion of fibrine gradually diminishes, and the blood is really thin. We would not, however, on any account, have it supposed that we are adverse to blood-letting under proper circumstances; we only wish it to be remembered, that it is a powerful remedy, and if unnecessarily recurred to, exceedingly injurious. Before dismissing entirely the changes which are induced in the blood by inflammation, we shall shortly notice its condition in the affections of the brain.

In the inflammatory diseases of the membranes of the brain, the same phenomena are apparent as in inflammation of other organs; but this has not always appeared to us to be the case when the cerebral structure itself is disordered. When this happens, the coagulum, instead of being firm, cupped, or buffed, is frequently very loose, and scarcely coagulating; and this is especially the case in those chronic maladies which are attended with headach, giddiness, throbbing of the temples, and numbness of the extremities. It is particularly necessary to be aware of the circumstance now mentioned, because, generally speaking, a loose coagulum is some guide in our practice, and few persons at all accustomed to note blood would repeat venesection when it has place. In most cases, also, this caution is exceedingly proper; but not when the brain is the seat of the malady. Symptoms alone must then direct us, and slow and loose coagulation must by no means be considered as prohibiting depletion.

Not the least interesting part of M. Gendrin's volume is that in which he considers the effect of inflammation upon the secretions.

The first effect of inflammation is rather to increase the quantity of the secreted fluid, and to render it apparently more liquid. As, however, the inflammatory action proceeds, the secretion gradually diminishes, till it is almost or entirely suspended. In some cases, the fluid secreted appears to be mixed with blood as it is diminished in quantity; and this happens both with the urine when the kidney is inflamed, and with the secretion of the mucous tunic of the intestinal canal.

However thin and more liquid the products of secretion may appear from an inflamed organ than from the same organ in its healthy state, they always contain a greater portion of coagulable matter, united to a little fibrine. This has been proved by analysis, so far as the serous membranes are concerned, and also with respect to the urine. There are many

circumstances attending the inflammation of mucous membranes, which render it certain that an increase of coagulable matter also exists in their secretions. Such especially are the exudation in croup, and the factitious membrane that is sometimes thrown off from the bowels.

As the inflammatory action diminishes, the secretions gradually return to their healthy state; but there is generally for a little time an increase both in the quantity and fluid state of the secretion.

Occasionally pus is secreted from the surface of secreting organs, and that without ulceration, and unquestionably the adhesion of the different parts of serous membranes consequent to inflammation, owes its first origin to a change in the nature of the secretion.

With respect to the composition of the factitious membranes of mucous tunics, no very perfect analysis has yet been made. In some cases they appear nothing more than mucus in a peculiar state of inspissation; but in others they exhibit the same properties with false membranes of serous tunics, such as solubility in acids and alkalies, and insolubility in waters. Regarded externally, the solid exudations of mucous membranes are very different in appearance. Some are white, rather transparent, and elastic; others are soft, easily torn, of a gray colour, and perfectly opaque. Occasionally they are slightly tinged with blood, but never exhibit any thing like incipient organisation. There are never any vascular striæ observable. The form of these mucous concretions is that of the tubes in which they are formed, and they are frequently of very great extent. Sometimes membranaceous substances of this kind have been thrown up from the lungs, shewing all the ramifications of the bronchi in which they had been lodged; and they are sometimes so firm and strong, when discharged from the bowels, as to have been mistaken for the inner lining of the intestines. There can be no question that these concretions have an inflammatory origin.

It has become of late years, both in France and England, the fashion to attribute every morbid change of which the animal system is susceptible to inflammation, that we are inclined to anticipate much advantage to pathologists from the course followed by M. Gendrin.

The latter part of the present volume exhibits a comparison between morbid phenomena which are inflammatory, and others which, though decidedly diseased, and often exciting, or accompanied by, inflammation in their progress, are evidently owing to some peculiar action, not of an inflammatory nature.

Softening of bone is one of these phenomena, and is evidently owing to defective nutrition. It has nothing inflammatory in its appearance, or in its results. There is neither redness of the periosteum, nor swelling, nor pain; neither is there caries, nor suppuration.

Respecting the softening of the mucous tunics, the more general opinion has certainly referred its origin to inflammation; and there are many cases which appear to confirm this opinion. It has place under very different circumstances, and with patients of all ages. The most frequent subjects, however, are young children and women. Children are so much more liable to inflammatory than to any other complaints, that this alone forms some support of the opinion. In women, it is a very frequent accompaniment of uterine disease. That the peculiar appearance may be known which has been named 'ramollissement,' it is necessary to give a more minute description, because there are softenings of this membrane having their origin most unquestionably in inflammation.

This 'ramollissement' of the mucous tunic has been divided into incipient, complete, and that softening which has terminated in the perfect disappearance of the softened parts. In the incipient stage of this disease, the mucous membrane is thinner than usual, and much paler than in the healthy state. There is no vascularity in the subjacent nor the surrounding membrane; neither is there any peculiar turgescence of the corresponding mesenteric vessels. The villi, examined with a lance, appeared smaller, and of a dull pale colour; they preserve, however, their apparent structure, but are reduced into a gelatinous, pulpy state, and are readily rubbed off by passing the finger over them. The blood-vessels under the softened part are fewer and less filled with blood than in the healthy condition, and there is little or none of the usual mucous secretion.

In the complete 'ramollissement,' the mucous membrane is marked with pale bluish patches, of different shapes and sizes, dispersed over a greater or less extent of its surface. These patches are more depressed than the surrounding parts, and the depression is equally sensible to the sight and to the touch. The tunic in these points is extremely soft, and so changed into a glairy mucus, that in many cases this coat appears not merely softened, but destroyed. The last stage requires no description, but it may proceed so far as to perforate the intestine.

That the appearances now described are certainly not the ordinary appearances or results of inflammation, is manifest;

and M. Gendrin is disposed to deny that they are at all dependent upon an inflammatory process. In all the cases hitherto observed, he states, that the first stage of softening of the mucous membrane has never been undeniably attended by an inflammatory affection; and even cases which prove that inflammation may exist simultaneously, though separately, are very few. In the second stage, inflammatory affections are more common, but still the complete softening is most frequent without them. Even, however, when inflammation does attend, it is important to ascertain whether it exists independently of the softening, or whether this is caused by the inflammation. In the inflammatory softening the affected parts are entirely disorganised, and instead of being depressed, are more prominent than usual. They are also redder than the surrounding surface, and the redness gradually decreases in intensity from the centre to the circumference. For some distance, also, from the softening, when it proceeds from inflammation, there is a great increase in the vascularity of the membrane, and the capillary vessels are considerably injected. But in the peculiar softening which we have been speaking of, there is no disorganisation, nor any augmentation of vascularity, and the diseased portion presents no other alteration than a progressive attenuation, a gradually increasing paleness, and an obliteration of blood-vessels, which are not only not distended, but successively disappear altogether. In fact, M. Gendrin contends that this, the idiopathic softening of mucous membranes, is neither attributable to inflammation, nor has any thing in common with it; nor does it appear to us that he is wrong in his conclusions. It is certainly most easy to regard and to treat every morbid alteration as proceeding from inflammatory action; but the simplicity thus sought after is far different from the simplicity of nature. She varies in kind as well as in degree; and certainly nothing has hitherto been gained to medicine by considering only the last.

Not less correct are the observations upon the nature of tubercles. That they are altogether the results of inflammations has never been asserted excepting by Broussais and his followers; but the treatment generally pursued is evidently founded upon the supposition of an inflammatory origin. It is nevertheless true, that they are frequently observable where no inflammation is present, and that the lungs, in which organs they have been so frequently traced, are perfectly free from inflammation in their earlier stage. We have often seen these organs when their whole substance has been pervaded by miliary tubercles, and which, separated by Bayle,

are generally now considered as differing from other tubercles only in size. And in such instances the colour and general appearance of the lungs have differed nothing from what is commonly observed in the healthy organ. There may have been some tubercles on the surface of the lungs, but excepting them, no very evident disease was perceptible; the lungs were only denser and of a greater specific gravity from the deposition of the tubercular matter; but the pulmonary tissue itself was perfectly healthy. In such instances there was nothing resembling inflammation. If inflammation accompanies tubercles, it is only when these last have undergone some alteration from their original state. They may as foreign bodies excite inflammation, but they are not its product.

Of Broussais' doctrines respecting cancer, we observed in a former Number at some length; and it is neither the shallow criticisms of some English Journalists, nor their evident incapacity for understanding what they read, which will make us change our opinion. Broussais is a talented man, but he is an unrelenting dogmatist. His single observations are often accurate and useful—his medical theories are contemptible.

' Infelix operis summa, quia ponere totum
Nesciat.

We cannot, perhaps, on the present occasion do better than present to our readers the recapitulation of M. Gendrin in speaking of cancer.

Cancer, he says, is neither inflammation, nor the consequences of inflammation. 1. Because it exhibits characters exceedingly different from those of inflammation. 2. Because it is not necessarily preceded by inflammation. 3. Because inflammation does not account either for the symptoms or the accompaniments of the disease. 4. Because it never originates from causes peculiar to inflammation. 5. Because it is preceded by the formation of an organised structure different both in its nature and appearance from the simple result of inflammation. 6. Because the formation of cancer may be explained by a peculiarity in the nutrition of a part: and, 7. Because cancer is the same in every structure; while inflammation, both in its progress and result, is modified by the peculiarity of the tissue in which it is situated.

At the conclusion of his work, M. Gendrin has cursorily considered the theory of inflammation; but there is nothing in this part of his volume peculiarly worthy of notice. Considered as a whole, the work is highly valuable, and affords details which, if they are to be met with at all elsewhere, are

spread over an immense number of volumes. It would certainly pay for translation; and as the cases might in many instances be omitted without detriment to the work, the translation might be afforded at a very moderate price.

IV.

DISEASES OF FEMALES.

Commentaries on some of the more important of the Diseases of Females. In Three Parts. By MARSHALL HALL, M.D., F.R.S.E., &c. Pp. 376. London, 1827.

How much of the present volume has been previously before the public, from not having Dr. Hall's former works in our possession, we are unable to state. Be this, however, as it may, the diseases of which he treats are important, as affecting the comfort and happiness of a very large part of the more delicate sex, and are among the most difficult to treat of any that come under the observation of the physician: for there are very few individuals among females who are not more or less liable to these disorders; and a degree of patience and perseverance, of accurate diagnosis and determination, are required upon the part of the medical attendant, which he does not often possess.

Dr. Hall has devoted his first chapter to the consideration of the disorders of female youth in general; and in doing this, he inquires into the causes that render women so much more frequently invalids than the individuals of the same age in the opposite sex. It is certainly true, that the causes enumerated by him must have a very powerful effect upon the constitution; and that there is a greater susceptibility of mental impressions in women than in men, has been too long recognised to admit of any question. It does appear to us, however, that there are other causes than those which are mentioned by Dr. Hall, and which are more in our power, at least more capable of being remedied by those who have the education of females, than they are either aware of, or would perhaps be willing to allow. It is quite evident, that whatever interferes with the natural functions of the animal system, whether arising from constipated bowels, diminished or excessive urinary secretion, deranged catamenia, too rapid growth, or impeded perspiration, must induce, according to the excitability of the individual, more or less constitutional disturbance. But as these causes are easily ascertained, so are very many of them, in the earlier stages at least, readily removed. The moral causes, however,

are neither so visible, nor so easily remedied; and it is, we apprehend, to want of attention in this department of female education, that many of their disorders are to be attributed.

In referring to the want of exercise, Dr. Hall has slightly touched upon a most important deficiency; and the manner in which this is permitted, the slow and stately movement with which the young inmates of a boarding-school are compelled to make their progress, deserves any thing but the name of exercise. It would seem as if a determination were made, that only a few of the muscles should be employed, and that a deadly inertness should be imposed upon the rest. Unfortunately, this want of active exertion ends not with its effects upon the body, but induces an equal feebleness of mind, an indisposition to contend with difficulties however slight, and to bewail, rather than by strenuous exertion to endeavour to overcome. From the slight observation we have made of female education generally, we should say that nine times out of ten it is wrongly conducted. Women are brought up, as it were, only for show; the evils they have to meet with in life are never pointed out; and the cultivation of those dispositions by means of which they would be most easily borne, is entirely neglected. We would not for one moment have it supposed that we wish to lose those peculiar tempers by which the sex is distinguished, or that for their delicacy and softness we would exchange the robust habit and harsher manners of men. But it is impossible not to perceive that the earlier education of women does not fit them for their after duties; and that hence these are either too often neglected for pleasure, or performed amidst perpetual irritation and moroseness. This is not, however, the place to discuss the subject at any length; and in applying these few remarks to the diseases treated of by Dr. Hall, we have only to inculcate moral as a part of medical management. We know this to be most useful,—we believe it to be most essential.

Dr. Hall has endeavoured to describe several forms of these affections, but we apprehend that if every modification should be treated of, the task would be endless. The complications are so various, that no two cases are ever precisely similar; and much depends not only upon the original constitution and temper of the patient, but also upon the external circumstances. More or less, all classes of life suffer from these disorders; but principally the better classes, whose lives are too often spent in listless indolence; and those among the lower, whose employments are sedentary. Married as well as unmarried females are liable to them, and they are often most obstinate and most severe in the former.

The first form of disorder of the general health, in its more acute form, is not peculiar to the female sex; but it is certainly far more common among women than men, and it may exhibit either an acute or a chronic form. It can only be called acute, however, comparatively, for it neither admits of the remedies of acute diseases, nor resembles them in the violence and rapid succession of its different stages. The principal symptoms are those of indigestion, with extreme excitability. The slightest circumstances will induce agitation, and there is frequent glowing, followed in a few moments by a cold clammy dampness, scarcely amounting to perspiration. The countenance becomes bloated, and there is more or less emaciation.

The tongue is almost invariably much loaded; sometimes, however, only slightly, whilst its edges are clean and red. In other severer cases, a load has been formed over the tongue, and has peeled off all at once, or in patches, leaving the surface of the tongue morbidly red, smooth, and tender. But, generally, the tongue, in the acuter form of disorder of the general health, is loaded, swollen, and cedematous, marked by pressure against the contiguous teeth, and formed more or less into sulci or plaits, and presents upon its upper surface numerous enlarged papillæ; the gums are also swollen, and sometimes red, at others palish, and they occasionally bleed; the inside of the cheeks are, like the tongue, frequently impressed by pressure against the teeth. To observe the sulci in its surface, it is sometimes necessary to distend the tongue by the pressure of two fingers, separating them in a lateral direction. The indentations in the edges of the tongue are most obvious early in the morning; but they are, as well as those in the inside the cheeks, always obvious enough on a careful inspection. With this state of the surface of the tongue, gums, and cheeks, there is frequently a slight degree of morbid redness, and perhaps of tumidity, about the tonsils and soft palate; the teeth and the mouth are in general foul, the saliva viscid, and the breath tainted and foetid; and I have occasionally known a degree of bleeding to take place, not from the gums alone, but from the posterior parts of the mouth; and this has chiefly occurred during the night, so that the patient has been awake, and has probably been greatly alarmed by finding a certain quantity of blood in her mouth.

We have copied this passage, because Dr. Hall places considerable reliance upon the indications of the tongue, and has even added plates of its different appearances. That any one who has been much accustomed to observe either this organ or any other, will recognise shades of difference often indicative of peculiar varieties of disease, is very probable; but it is to be remembered, that the appearance of the tongue will prove nothing without other symptoms. For though we allow the correctness of the opinion, that in the 'acute

disorder of the general health' the appearances of the tongue are uniform, it is equally true that the same appearances accompany other disorders; and that in the protracted cases of indigestion, unaccompanied by those peculiarities which mark the present affection, it is very common.

In addition to the appearances of the tongue, there is often a peculiar tremor, excessive nervousness, frequent headach, and a complaint of a great variety and of very anomalous sensations. Frequently the impression made by the application of leeches, cupping-glasses, &c. is complained of for months after their employment; and many of the unpleasant feelings will be referred to that period. Emaciation naturally ensues to a greater or less degree under such circumstances, and the functions of digestion are greatly interfered with. Fluttering of the heart is a very common and a very distressing symptom; and though it may be momentarily removed by sal volatile, it continually returns, unless the original disorder is remedied.

The protracted form of this disorder varies only in the less intensity of the symptoms; but there are increased pallidness of the countenance, much augmented debility, and the general languor both of body and mind is far more apparent, and less resistible. Dr. Hall says, that the 'surface of the face is not affected with perspiration, as in the acute form of this disorder, nor is there the same degree of nervous tremor.' But our experience would lead us to believe that there is no uniformity in this symptom. With some individuals it is early observed, and lasts long, sometimes being one of the last symptoms to yield; with others, it is only in the more acute stage of the disorder that it is visible. The appearances of the tongue in these protracted cases are thus described by Dr. Hall. It will be seen, however, that they vary very little, if any, from those appearances which always occur in chronic diseases.

'It has, in the first place, generally become gradually clean, and free from load; together with the whole internal mouth, it has lost its clamminess, its mucous covering, and its halituous appearance; and the secretions of the mouth and the breath are less offensive, and I have known them to acquire the peculiar odour of new milk. The morbid character of the tongue is evidently not of recent formation; it has no longer those acute impressions from its pressure against the teeth observed in the acute form of this disorder; the indentations are still very marked, however, but their edges are rounded off; the sulci on the surface of the tongue are, in many instances, still more marked even, but they also have assumed a different character, evidently the impress of long duration; the papillæ are frequently still more enlarged, being much elongated in some cases,

and expanded laterally in others. . . . The sulci are in different tongues of every variety of form; sometimes being in lobules, sometimes in squares; and frequently accurately resembling the sulci of the cerebellum.

'From the appearances of the tongue it is often possible, not only to detect the existence of protracted disorder of the general health, but even to form an accurate conjecture relative to the length of duration of this morbid affection; and this is a point of great importance, for we are led by it to give a more accurate opinion as to the probable duration of the complaint, even under the best mode of treatment.'

The lobulated tongue, Dr. Hall states, that he has 'repeatedly observed to accompany simple enlargement of the liver, of which disease it is therefore a symptom; or rather it is a symptom of such protracted disorder of the general health, as is apt to issue in enlargement of this organ.' With this limitation, we know not that any objection can be made to the remark. We have frequently observed it, however, where no affection of the liver has been manifested; and we have at this time a young lady under our care in whom it has existed for two or three years without any particular hepatic disturbance. She is suffering from psoriasis, accompanied unquestionably with disorder of the digestive functions. The lobulated state of the tongue has gradually yielded as her health has improved. Before entering upon the treatment of these disorders, we shall run through the varieties enumerated by Dr. Hall. The next is 'that form of disorder of the general health attended by extreme pallor or chlorosis.'

In the description of this complaint, it does not appear to us that any new observations are brought forward, though perhaps a little more minuteness may be observable in the description of the symptoms. The most valuable part of this essay is where the distinction is insisted upon between pain arising from inflammation, and that which accompanies chlorosis. The opinions inculcated in the following extract so accurately coincide with our own experience, that we particularly recommend it to the attention of our readers.

'The patient affected, with chlorosis is extremely subject to attacks of the local affections already mentioned, (pains in the chest, abdomen, head, &c.), and to the same affections in a more continued form. It is therefore essential to distinguish the complication of this morbid affection from some sudden and some chronic diseases. The first case in which I saw the necessity and the importance of these distinctions had been successively treated as inflammation of the brain and inflammation of the liver, by bleeding, blisters, and leeches, to an almost incredible extent, the

patient having first been subject to severe pain in the head, and afterwards to pain of the right side. The pain was distinguished by the usual appearances and symptoms of disorder of the general health, and it was perfectly and even promptly relieved by the appropriate remedies. . . .

‘The cough and dyspnœa, the palpitation of the heart, the pain of the side, and the pain and tenderness of the abdomen, are to be distinguished from inflammation within the chest or abdomen in the same manner, by comparing the general and local characteristics of chlorosis with those of each of those diseases, and by ascertaining the history and observing the effects of remedies.

‘The pains of the side or of the abdomen, so apt to occur as complications of chlorosis, are to be distinguished from pleurisy or peritonitis by the same recurrence to the state of the complexion, tongue, and general surface, and to the other symptoms, and by their own peculiar character; these pains, for instance, are less constant both in their situation and duration than those of an inflammatory nature, and though sometimes aggravated by a deep inspiration, are not invariably so, especially on repeating the inspiration a third or fourth time. The accession of pain of the side in chlorosis is apt to be sudden; the side affected is sometimes changed, the degree of pain sometimes extremely severe, at others less so, and there is more expression of pain than is permitted by the pain of inflammation, which represses the movements of respiration, implied in the loud expression of pain.’

These remarks are exceedingly valuable; and in the present prevailing rage of attributing every morbid affection to inflammation, they can scarcely be too deeply impressed. For be it remembered, that the remedies which are essential in real inflammatory diseases are absolutely injurious in chlorosis. The oftener that blood is taken, the more frequently do the local pains recur, and the more obstinately do they resist the most appropriate measures of relief. We have sometimes seen such cases in which blood has been drawn for the purpose of alleviating the headach, which in this complaint, as in true inflammation, is often attended with intolerance of light; and so far from relief having been obtained, the disorder of the head has been much aggravated; nor has any ease been obtained till the head had been kept for several hours, and sometimes for several days, continually bathed in cold water. The explanation of this circumstance lies, we believe, in the fact, that in a debilitated state of the constitution, local congestions are very apt to take place; but these congestions are altogether different from inflammation. We could almost say that they consist in a simple ‘error loci,’ one organ receiving too much blood, while another receives too little. But the peculiar state of the part, which has been termed inflammation, does not occur; there is neither violent

action, nor effusion of coagulable lymph. Under these circumstances, the object is rather to equalise the circulation than to reduce the quantity of the circulating fluid. It is certainly true that general depletion will temporarily relieve headach, even when the congestion occasioning it arises from debility, because while the whole mass of the circulating fluid is lessened, the quantity contained in the brain is likewise lessened. But in increasing the original cause, the foundation is laid for a recurrence of pain, and this is often far more violent than in the original attack. So little, indeed, will some patients thus affected bear depletion, that a few leeches will occasionally produce all the evils that we have referred to. The inference, therefore, is, that blood-letting ought to be employed in such cases with the very greatest caution.

At the conclusion of this chapter, Dr. Hall has noticed very briefly 'a peculiar species of dropsy,' which he considers allied to chlorosis. His description is merely, that 'the surface of the body, but especially the more dependent parts, are anasaruous.' We are not enabled exactly by these words to recognise this affection; but there is not the slightest doubt in our minds that there are dropsical affections arising from debility, and requiring general and local treatment of the same kind with that which is demanded in chlorosis. At this very time a young woman is under our care in whom this anasaruous state has existed, together with protracted disorder of the general health. The anasarca has disappeared, and there is considerable improvement in the general condition of the system.

In the succeeding chapter, 'those forms of disorder of the general health attended by other changes in the complexion,' are considered. These changes are very striking, and are most admirably portrayed in the accompanying plates. They are named by Dr. Hall, 'the icterode, or yellowish; secondly, the light lead hue; and thirdly, the ring of tumid darkness occupying the eyelids.'

These complexions do not appear to be associated with any particular form of general disorder; but, so far as our memory serves us, there is always some derangement in the flow of the catamenia when the countenance has assumed any of these peculiar appearances. This seems to be the impression also of Dr. Hall, for he says that 'the catamenia vary exceedingly. When the prolabia are very pale, the uterine discharges are, as I have already remarked, also pale and scanty, or perhaps suppressed. In the other cases, the catamenia are more apt to be discoloured, perhaps dark-coloured, and irregular in their returns and duration. In some instances,

nevertheless, the patient has stated the catamenia to be perfectly regular in their returns, and natural in their colour and flow.' Where the morbid complications of these complexions are not very marked, which occasionally happens, little more treatment is required than the careful exhibition of purgatives, and regular and active exercise. We believe, with the late Dr. Parry, that walking exercise is far better than any other, and that riding, either on horseback or in a carriage, should only be allowed when patients are unable to bear any greater exertion.

Under the head of 'hysteria,' a slight review of the general symptoms attending upon this affection is taken. As it depends always upon disorder of the general system, generally accompanied with irregularity of the uterine functions, the curative treatment is of course the same with the treatments of those disorders which have been already considered. It is, however, of some importance to be able to relieve the paroxysms. Much, in this respect, must depend upon the immediately exciting cause. When the attacks originate, as they sometimes do, from errors in diet, and the patient can swallow, emetics are very serviceable; but when they have arisen from mental emotions, the common antispasmodics are beneficial, and emetics are rather calculated to do mischief. When hysteria is exhibited in the form of the 'clavus hystericus,' large doses of opium will frequently produce immediate relief. Our attention was some time ago particularly called to a case of this kind in a young lady. She was seized with a violent pain in the left temple, which she could cover with the point of the finger; and in a short time after the commencement of the attack she became insensible: her mouth was sometimes also a little drawn. In this state she lay for several hours, occasionally sighing, opening her eyes, exclaiming 'oh my head!' and instantly relapsing into insensibility. After eight or ten hours she came to herself, but complained for a day or two of the pain in the temple and great languor. The pulse during these attacks was large, firm, and about seventy in the minute. After trying various general means, and once having recourse to venesection without any alleviation, she was ordered to take half a scruple of compound ipecacuanha powder as soon as ever the pain was experienced, and with the effect of completely superseding the attack. The relief has been generally instantaneous. The description of this affection by Sauvages is so accurate, and the practice recommended so perfectly accordant with general experience, that we insert the passage from his nosology:—'Clavus hystericus est doloratrix perterebrans, capitis, in parte quam pollex vel ovum tegeret, clavi infixi sensa-

tionem referens cum animi desperatione, prostratione, sæpè delirio, hystericas, chloroticasque discrucians. Arabibus etiam ovum et testa dicitur, si paulò majus occupet. Hic morbus atrox phlebotomiis incassum oppugnatur. Valet hic tantum curatio eadem, ac in gastrodyniâ hystericâ, scilicet serum lactis et laudanum.' *The clavis hystericus is a severe piercing pain, in a part which the thumb could cover, &c. It is vainly treated with blood-letting; and the same plan is alone beneficial which relieves hysteric gastrodynia, viz. whey and laudanum.*

There are many other forms of disorder of the general health which fall daily under the observation of the physician, but which are scarcely susceptible of any precise classification. The same kind of symptoms are present in all, but variously complicated, and sometimes one symptom predominating, sometimes another. But, in the language of Dr. Purcell, who described 'vapours or hysteric fits' very accurately, more than a century ago, 'all these accidents do not happen to every one that has hysteric fits or the vapours, but some to one, some to another; this person shall be molested with a great many, that with but a few.'

Dr. Hall has related the cases of two females whose diseases were owing to the exhaustion consequent to a residence in a hot climate. They do not strike us as presenting any thing very deserving of notice beyond what we have already mentioned. They prove that reaction may take place in a debilitated state; and one particularly illustrates the effects of blood-letting in such instances.

The ninth chapter is entitled, 'of the Diagnosis and Symptoms of some Local Inflammatory Diseases.' The whole is well worthy an attentive perusal; and, concurring as we do in the general accuracy of the observations, it appears expedient to guard ourselves against any misapprehension. For this purpose we cannot do better than employ Dr. Hall's language.

'It is the fashion of the present day to consider every local pain, and other affection, to be inflammatory, and forthwith to use the lancet. I sincerely trust that I shall not, in this work, make one remark which might mislead the young or unwary practitioner to neglect the use of this most powerful and essential remedy when inflammation does really exist. I would even say that it is far better that the lancet should be used twenty times unnecessarily, than that it should be neglected once when really necessary. But still it is my duty to state that I have seen many, very many cases of protracted indisposition which have entirely ensued from the misapplied and unnecessary use of the lancet; and I would insist upon this point the more earnestly, because I believe it will be generally found, in such cases, not only that the disease was mis-

taken, but that other remedies, which ought to have been administered with or without blood-letting, had been omitted. The mode of treatment which I would propose, in doubtful cases, is also safer than that of the indiscriminate use of the lancet; and, notwithstanding the admission which I have freely made above, it is incumbent on me to observe, that protracted indisposition is not the only bad effect of misapplied blood-letting, but that that remedy has, as well as the neglect of it when really necessary, been attended with fatal consequences.'

In addition to these observations, we would wish it to be remembered, that inflammatory action may supervene in a patient who has long suffered from indigestion; and that, though both Dr. Hall and Dr. Wilson Philip agree in the opinion that such patients ill endure large depletion, they both allow that it is occasionally absolutely necessary. It is the more important to keep this in mind, because it might be thought by some, from the general tendency of what has been said, that large depletion can never be called for in protracted disease of the general health. This, however, only renders great caution necessary in depleting; it is not sufficient to prohibit it in every case.

We do not purpose following the author through his chapter on tuberculous diseases, because it seems to us altogether a different affection from those which have been previously considered. With respect to the local affections that are mentioned, it is, we apprehend, pretty generally allowed now, that they all originate from disturbance of the digestive function. In the review we gave of Mr. Koecker's work on the teeth, we particularly mentioned the influence of general disease upon these organs, and the same observation may be applied to the nails. Under certain conditions of the general health, they become cracked and mis-shaped. The harsh and cracked state of the skin remarked by Dr. Hall, corresponds, we apprehend, with the psoriasis labialis of Bateman. In a late review upon diseases of the skin, we particularly mentioned the coincidence of disorder of the general health with cutaneous complaints. We perfectly agree with the observation, 'that these local affections seldom, if ever occur, without disorder of the general health,' and they can only be managed successfully by referring to their origin.

In considering the proper manner of treating these peculiar diseases, our attention is necessarily first called to blood-letting. Unquestionably, in both the acute and the protracted disorder of the general health, local blood-letting is far safer than general, and we should also say that it is usually more efficacious. There are, however, cases in which general depletion is called for as progress is made towards recovery, the

very improvement apparently producing a plethora. We shall, perhaps, make ourselves best understood by instancing such cases as are attended with menorrhagia. Some time ago an example of this kind came under our care. The individual suffered very much from profuse menorrhagia, and there was seldom more than a week between the catamenial periods. Joined with this was violent headach, giddiness, and ringing of the ears: the pulse also was full, but not firm. Regarding these latter symptoms as the consequence of the menorrhagia, and this as depending upon disturbance of the general system, the treatment was entirely directed to the latter affection. The success was very speedy: the digestive functions were restored, the intervals between the flow of the catamenia were prolonged, and the cerebral disorder disappeared. After, however, the intervals had become as much as three weeks, the headach recurred, with very nearly the same symptoms, but with a full and very hard pulse. Blood was now taken from the arm, with immediate relief, to the extent of sixteen ounces; and her recovery from this time was progressive. She has had no relapse, and the menstrual periods are natural. The necessity of taking blood in this case actually arose from the diminished flow of the catamenia, although this was still equal to the flow of health. But the system had become habituated, to a certain extent, to profuse evacuation, and did not well bear its sudden suppression. More commonly, however, in the cases of disordered general health, venesection is injurious, and even local depletion is ill borne. In an instance of this kind some time ago, the application of six leeches caused all the nervous symptoms to recur, which had previously been overcome. The patient had been confined about three months before, and had been bled very largely, both generally and locally, for supposed disease of the head, but with the effect of aggravating all the unpleasant feelings. Tonics, and great attention to diet and regimen, had greatly relieved her, and she appeared to be gradually recovering, when it became necessary to apply leeches for inflammation of the throat, and again she became low, nervous, easily agitated, &c.

Perhaps the most difficult cases to determine respecting the propriety of sanguineous depletion are those in which there is pain in the side or abdomen, with great tenderness on slight pressure, and a rather sharp pulse. Dr. Wilson Philip has much insisted upon this last symptom as indicating the propriety of local blood-letting, and it certainly may much assist us in our judgment. It may perhaps, in some cases, be advisable to recur to leeches or cupping in the first instance; but if no permanent relief is experienced from the

remedy, there really seems no reason for repeating it. As one mode of diagnosis, Dr. Hall mentions the effect of pressure; for pressure, if continued, in inflammation increases the pain; but the contrary is the case in those abdominal pains that arise in indigestion. Some mistake, however, may be made in this case, if care be not taken that the pressure be equal; for general pressure appears to support and to relieve the part, while partial pressure most decidedly increases the inconvenience.

Some guide also may be found in the state of the catamenia, and in the history of the complaint. It does not often happen that the menstrual discharge remains unchanged. It is either increased or diminished in quantity, changed in colour and smell, or attended with more than an usual degree of pain. It is clear, that if menorrhagia attend, with the symptoms of debility, the local pains will not very probably be relieved by local depletion: nor is this remedy called for if the disease has been of long duration, and the diminished flow of the catamenia takes place very gradually. If, on the other hand, the obstruction of the menses should have been sudden, if the menorrhagia should be unmarked by any great exhaustion of strength, and the pain should be continued, blood-letting will probably be useful. In the cases which arise from debility, *sal volatile* alone will sometimes give temporary relief: and if this is not sufficient, it may be united with a little *laudanum*.

There is one symptom that often accompanies the pain in the right hypochondrium, which Dr. Hall has scarcely noticed, but which in severe cases is very fearful to surrounding friends, and very distressing to patients. It consists in a very sudden attack of dyspnœa, with great aggravation of pain in the affected part. The affection appears to depend upon some spasmodic action of the diaphragm. The chest is very little enlarged lengthways, and every inspiration is attended with violent pain. When an attack of this kind has once happened, it is very liable to recur, especially after any mental anxiety. Blood-letting will sometimes relieve it for the time; but it is most successfully managed by mild opiates and *sal volatile*: if depletion be carried far, it very evidently aggravates the attacks, and renders them more frequent.

The general fact, then, in cases of long-protracted disease (and it is not peculiar to the particular forms that are treated of by Dr. Hall), is this, to wit, that depletion is not always a proper nor a successful remedy, and that it is not always safe; that though a great variety of diseases originate from, or are attended with plethora, there are others which are derived from a directly opposite source, and which require a different

and almost a contrary practice. The object, in truth, that we have in view in making the remarks which we have made upon depletion, is simply to recall this very evident circumstance to the minds of medical men, and to induce more caution in venesection, &c. than is now generally employed. We have endeavoured to steer between two opposite, and both dangerous, extremes, — that of an unreasonable fear of, and an overweening confidence in, the efficacy of sanguineous depletion. If we have been unsuccessful in the attempt, we shall lament indeed; and we can but beg those who may peruse these pages to turn from us to the actual observation of disease. Let them only candidly, patiently, and without prejudice, attend to the effects of blood-letting, and we are confident that they will speedily arrive at those inferences which we have drawn already. But as they will have the book of nature before them, they will do it with far more accuracy than our limited power may have enabled us to attain.

The other remedies that are called for, are such as have for their object the correction of the digestive functions and of the secretions. As the bowels are always more or less disordered, sometimes being constipated, at others relaxed, and the dejections being offensive or of an unhealthy colour, these organs naturally demand the first attention.

There are very few individuals who do not require the bowels to be very fully evacuated before any other remedies can be advantageously resorted to; and unless there is very sufficient reason for believing that this has been already done, it is always best to commence the treatment with an active purgative. We completely agree, however, with Dr. Hall, that when a full evacuation of the alimentary canal has been effected, 'the teasing and irritating operation of medicine' should be avoided. With respect to the particular medicines that may be employed for the purpose just referred to, it does not appear to us very important which are exhibited; nor, indeed, can any positive rule be laid down. Castor oil is probably the least irritating in general, and may therefore be safely given, even in very debilitated states of the constitution. Every practitioner ought to vary his purgatives according to the peculiarities of his patients; and it should be particularly his endeavour to ascertain whether aperients act readily or not upon the bowels. With this precaution, he will be enabled to avoid any ill effects that would inevitably follow upon hypercatharsis.

Having attained this first point, the bowels should afterwards be freely moved only once a day; now and then, perhaps, two or three free operations in the day being procured.

It is, however, of importance to remember, that the egesta will always be governed by the ingesta; and that if the latter are very small, the daily evacuation of the bowels may be injurious. We have sometimes found advantage in suffering two or even three days to elapse without any alvine excretion, and after this time the bowels have been regularly evacuated without medicine. It is especially necessary to attend to this point after full purging; because, when this has been effected, some time is necessary for a sufficient accumulation of fæces in the rectum. The object, however, in this, as in every other case, is to restore the healthy function, not to institute an artificial one; and this will never be obtained by perpetual irritation.

The next part of the treatment recommended by Dr. Hall is the exhibition of mild cordials and tonics; but in this our experience scarcely coincides. We are, as we have indeed fully proved, thoroughly aware of the danger attendant upon indiscriminate depletion, but we really are equally afraid of the employment of tonics. In the very weak state of the digestive organs, they certainly are not often borne with impunity, but, on the contrary, add to the heat, feverishness, and languor. A gentle and mild plan, on the other hand, is frequently serviceable, when even weak bitters rather aggravate the complaint than relieve. Whatever real efficacy as an alterative sarsaparilla may have in pseudo-syphilitic complaints, it is generally very useful in a delicate state of the stomach, and will prepare the way for a more decided tonic. In some instances it is productive of nausea and vomiting, even in the small doses employed for this disease; *i. e.* not more than an ounce and a half or two ounces three times a day. When this happens, the infusion of dandelion is a very excellent substitute, and may even be advantageously employed in the first instance. After this plan has been followed for some time, either columba, cascarilla, or cusparia, may be given; and these bitters may be usefully combined with the spiritus ammoniæ aromaticus. In chlorosis, the sulphate of iron is a very beneficial adjunct, and even occasionally appears to act as a specific. The sulphate of quinine also is a valuable medicine in this disease; but its high price must, for the present, prevent a very extensive employment of it. There is, nevertheless, one particular form of disorder in children about ten or twelve years of age, where it has succeeded with us when all common remedies have failed. It appears to be a species of marasmus, and often succeeds acute disease, as measles, scarlet fever, or common catarrh. The patient gradually wastes away, with increasing debility, slight cough, some dyspnœa, and a peculiar, fair, transparent complexion,

such as often precedes the more perfect development of phthisis. There is pain also in the bowels, and generally in the right hypochondrium : the pulse is quick and small ; the fæcal evacuations offensive and irregular ; and the urine scanty, turbid with mucus, and depositing a salmon-coloured or dark-red sediment. Twice, lately, in this kind of complaint, we have seen the sulphate of quinine successful, when we almost despaired of the patient's recovery.

Next to the regulation of the bowels, the regulation of the urinary secretions ought to be attended to ; and though quacks may have built too much upon the variations of the urine, it is equally certain that it has been too much neglected by regular practitioners. The infusion of *taraxacum* is very serviceable in attaining this object, and may be usefully combined with the nitrate of potash or the liquor ammonia acetatus. Both these last operate in some measure also upon the cutaneous excretion, and have thus a twofold beneficial effect. They who have not much attended to the derangement of the renal functions in long-protracted disease, will be surprised at the consequence of correcting such derangement, the general improvement of the health being so speedy and so decisive.

The uterine functions being also more or less irregular in these disorders, may perhaps demand some particular care. So far, however, as our experience has gone, the interruption of the regular flow of the catamenia, or their unhealthy appearance, is much more frequently the consequence than the cause of disease in the general system ; and as improvement takes place in this respect, the uterus resumes its healthy state. Doubtless, however, there are cases in which the first disorder is situated in this organ ; and even when it is merely a symptom, it may react upon the constitution, and require specific treatment. It is impossible, however, to lay down any very precise rules for practice where the uterus is concerned. We would generally inculcate the advisableness of caution in adopting any remedies peculiarly directed to correction of the uterine functions ; and this so much the more, as women are themselves very apt to refer all their unpleasant feelings to this source. When there is a tendency to congestion in the head, with obstructed catamenia, the French practice of applying leeches to the vagina is often more serviceable than double the quantity of blood taken from any other part ; and it is certain that a sudden attack of menorrhagia will relieve disease that has been vainly treated with general and local blood-letting. Some time ago a very curious instance of this kind fell under our observation. A young woman had for several months suffered from an ovarian tumour, and had

experienced considerable pain. From the little good that is derived from lengthened treatment in this disease, she was recommended, after she had been repeatedly and largely bled with leeches, and from the arm, to suspend medicine entirely, unless any particularly inconvenient symptoms should supervene. After having followed this advice for some months without any apparent alteration of the tumour, she was seized with most profuse menorrhagia, and the tumour very much diminished in size. For the several succeeding periods, the menorrhagia returned, and each attack was followed by lessening of the tumour; and at the present time it can scarcely be felt at all.

Excepting blood-letting, local or general, and the employment of issues, &c. in the neighbourhood of the pelvis, there are no remedies which can act immediately upon the uterus. All medicines act through the general system, and the uterus consequently participates in the general improvement.

So much has lately been written upon diet, that we are very little disposed to enter upon the subject here. It is, however, a most important point of the management of these diseases; and without attention to its regulation, all other remedies will be certainly fruitless. The directions to be given are precisely the same with those which are necessary in every other dyspeptic complaint. Mild and nutritious diet, great care not to overload the stomach, and by no means to permit fluids of any kind to be taken in abundance.

The only other points which remain to be noticed are clothing and exercise. With regard to the former, we should always recommend the wearing of flannel; thus defending the body from the sudden changes of temperature, and at the same time preserving a due secretion from the skin. But there are some individuals who have the cutis so tender that flannel irritates and inflames it almost beyond endurance. In this case it may either be worn over calico, or wash leather may be substituted for it. It is, however, a very material object to maintain a due degree of perspiration.

The subject of exercise deserves very serious consideration in the treatment of protracted disease; and most necessary is it that it should be regularly persisted in. From the feelings of debility with which such complaints are attended, the patients are very unwilling to exert themselves; and very often they are only capable of very limited exercise. By perseverance, however, their power may be increased; and it should be strongly inculcated upon the friends, that which is really the fact, that without exercise medicines are worse than useless. When the debility is extreme, the earliest opportunity should be taken to afford passive exercise; and

as soon as possible the patient should be made to walk out, though it should only be for a few yards. Change of air and scene may likewise be recommended; and every subject should be avoided that has the slightest tendency to depress the mind.

The portion which we have hitherto reviewed is only the first part of Dr. Hall's Commentaries. The second part is entitled, 'on some Diseases incident to the Puerperal State,' and contains many useful observations. The subject, however, is too extensive for us to enter upon now. To discuss it partially might lead to very serious errors in practice, and we shall content ourselves therefore with this brief notice.

The third part is headed, 'of the Disorders incident to the middle and later Periods of Female Life.' It does not appear to us that this contains much novelty, nor any thing that demands very particular remark. His observations, however, upon 'the period of the final cessation of the catamenia,' may be advantageously perused; not so much from the novelty of the opinions inculcated, as from their accuracy. Stating the occurrence of scirrhus either in the uterus or the mamma as dependent upon disordered general health, and that if this were 'perfectly good, the cessation of the catamenia would always be accomplished naturally, without either disturbance or danger to the patient,' he impresses the necessity of not confining the medical attention 'to the exact period of the cessation of the catamenia,' especially as at and soon after this time the diseases referred to most frequently occur.

'The period including several years before the disappearance of the catamenia, the space occupied by this change, and several years afterwards, may therefore be, with great propriety, termed the first climacteric period of female life; and it is to be watched, for the reasons which have been amply detailed, and in the manner prescribed.'

The plates attached to this volume are particularly excellent; and the three plates illustrative of the complexion in decided chlorosis, and some of the diseases allied to it, are so accurate, that the commonest observer cannot fail to recognise their fidelity. We believe that the work may be very usefully consulted, especially by those practitioners who have imbibed without discrimination the dogmata of the inflammatory school.

PART II.
COLLECTIONS OF MEDICAL FACTS, WITH
OBSERVATIONS.

SECTION I.—ABSTRACTS OF PRACTICAL FACTS, BRITISH AND
FOREIGN, WITH REMARKS.

I. *Facts relative to Paraplegia.* (From a posthumous MS. of
the late Dr. BAILLIE.)

‘ A CLERGYMAN had gutta serena of one eye along with paraplegia.

‘ A nobleman had the vision of both eyes very much impaired in paraplegia from gutta serena, but this affection at length a good deal subsided.

‘ A gentleman had a temporary gutta serena, and an occasional dropping of one eyelid, with paraplegia.

‘ A gentleman had his memory much impaired, and his mind so confused, that he could not keep his own little domestic accounts during the latter period of paraplegia.

‘ A gentleman had a dilatation of the pupil of the right eye, with an occasional dropping of each upper eyelid, in paraplegia. The dropping of the eyelids has subsided.

‘ Mr. Earle told me that he had attended a case of paraplegia, in which the intellect was extremely imperfect for a considerable time before the patient's death. Tumours were found, upon dissection, to be formed in the brain.

‘ A young lady was subject to very severe headaches, to considerable drowsiness, and occasional defect of memory, in paraplegia.

‘ A young man had double vision for more than six weeks in paraplegia. His arms were numb and weak, and he had sometimes great difficulty in writing.

‘ A lady had severe headaches, and numbness and weakness in her hands, in paraplegia.

‘ A gentleman had great weakness and numbness of his hands in paraplegia, so that he could not distinguish, by his feeling, a shilling and a sixpence from each other.

‘ Another gentleman, in paraplegia, had gutta serena of his left eye; had great weakness in his arms, with indistinct feeling, so that he said he could not distinguish, by the touch, shillings and sixpences from each other.

‘ A lady, in paraplegia, had impaired vision, severe headaches, and weakness in her arms and hands, so that often objects that she held in her hands would drop from them.

‘ A gentleman, in paraplegia, had much giddiness of the head, and could write (from the weakness of his hands) with great difficulty.

‘ A gentleman, in paraplegia, had great confusion of the head, occasional defect of memory, occasional paralytic imperfection of speaking, and often wrote very indistinctly. His hand-writing formerly was remarkably distinct.

‘ A gentleman, in paraplegia, had severe headach, the right eye blind, the pupil of the left eye a good deal dilated, and a memory sometimes defective. (Signed) ‘ M. B.’

‘ Dec. 8th, 1822.’

The above remarks are copied from a paper by Dr. Burder on paraplegia, in the *Yellow Journal* for May. The object of Dr. Baillie in collecting them was evidently to illustrate the nature of paraplegia, and its connexion with disease of the brain. He is known to have inclined to the opinion that this organ was the source of paraplegia oftener than the spinal chord. Dr. Burder argues that the spinal chord has not been sufficiently examined in these cases to justify such a conclusion, or indeed the inference, that at any time paraplegia has depended upon cerebral affection only. The subject is certainly deserving of further investigation.—
EDITORS.

II. *Peculiar Effects of Lightning.*

THE returning stroke of lightning is well known to be due to the restoration of the natural electric state, after it has been disturbed by induction. Thus, if a person be brought into a highly electric and negative state by induction, from the approximation of a body highly charged positively, and then the latter be discharged by means having no connexion with the negatively electrified person, the negative state of the latter will be immediately destroyed, and an effect in part analogous to that of a positive discharge of electricity will be produced. Some of the most serious accidents which occur from lightning are supposed to be produced in this way, not by the mere disturbance of electricity in a person only, but of the electricity of those bodies with which the person may be in contact, and to which he accidentally serves as a conductor.

On the 24th of Sept. 1826, at the moment when the lightning struck the ground, at the farm of Gali, near Versailles, M. B—— was violently affected by a returning stroke, at the distance of half a league from the place. The following are the circumstances of the case:—A violent storm occurred at Versailles, and the neighbouring parts, at half-past nine o'clock. M. B., aged seventy-two years, was passing the Rue Dauphine, at a little distance from the church of Notre Dame, when one of those whirlwinds so common in the neighbourhood of large buildings, obliged him to turn round. He was then close to the party-wall of the houses 13 and 14, his right side being at a small distance from it. A metal water-pipe was fixed up the front of the house in this place, bringing the rain from the roof to the level of the pavement. In this position M. B. felt a commotion, which he describes as if all the right side of his body was roughly thrown towards the left; feeling, at the same time, much oppression, and vertigo, resembling that of drunkenness. The immediate effects were, difficulty of motion in all the left side, and a disturbed respiration; and it was with much difficulty, and only by resting frequently, that M. B. could reach the house of a neighbouring friend. It was there observed that the tongue was embarrassed in its motions as well as the left side, but by the aid of

attention the agitation of the mind was calmed; the night passed moderately, and the next morning all was nearly in its ordinary state. In the evening, however, at the hour when the circumstance occurred, all the symptoms returned; and the same results occurred daily until the end of the week, when a physician was consulted. He immediately recognised the symptoms of compression on the brain and spinal marrow, from which had resulted an incomplete paralysis of the tongue and the left arm and leg. This speedily gave way under the hands of the physician, but the periodical returns occurred until the cure was completed.

It would be difficult to prove the identity of the electric discharge which fired the farm of Gali, and struck M. B., but the latter cannot be attributed to a direct stroke; for, at the moment when it happened, the intervals between the lightning and thunder were such as to shew that the storm was not over Versailles. By a coincidence of circumstances, M. Demonferrand, who describes the case, was in the house No. 15, the whole of the evening, in an apartment contiguous to the metal pipe, which appears to have served as a conductor for the electricity; but neither he nor any other person in the house felt the slightest disturbance. In the opposite house was a person in a bad state of health, and therefore, perhaps, more sensible to electric changes; but neither did he experience any change in his feelings at the moment.—(*Journ. of Science.*)

III. *Sharp or Blunt Lancets in Vaccination.*

DR. GREGORY insists on the employment of a lancet even sharper than one fit for venesection—but we know that a gentleman here, who vaccinates an immense number annually, prefers a *broken* lancet. If the lancet be broken off about one-twelfth of an inch from the point, it may be pushed against the cuticle so as to abrade it without the loss of any blood, (which is the most frequent cause of failure, as the blood washes off the virus), and then some of the dissolved virus is placed and pressed on the scratched part: this practice rarely fails. We have used the scab after keeping it several months; and, if carefully watched, the vesicle produced will, in such cases, be found strictly conformable to the character which the true vaccina ought to possess.—(*North American Med. Journ.*)

IV. *Permanent Evidences of Perfect Vaccination.*

1. A TRUE and perfect vaccine scar should be distinctly defined, even after the lapse of twenty years;—that is to say, the specific inflammation should have penetrated the cutis vera to such a depth that the scar which results is clearly to be traced in all periods of after-life. In order that this should take place, it is nearly indispensable that the scab should remain on—or, at any rate, that cicatrization of the sore should not be completed prior to the twenty-first day. I have seen, however, cases where the cicatrix was formed as early as the fourteenth or fifteenth day. In all such

cases the impression of the scar wears out in the course of time, the vaccination is imperfect, and the system is either partially, or, after the lapse of a certain number of years, wholly open to the attacks of small-pox.

2. A true and perfect vaccine scar should be circular, or nearly so. That is to say, the specific inflammation should not have been superseded by common inflammation. Should this, indeed, take place *late* in the disease, the scar will be irregular, but the vaccination may still be perfect. When, however, common inflammation supervenes early, the scar is irregular in its form, the vaccination is incomplete, and the system remains susceptible of small-pox, more or less modified, according to the degree of perfection which the vaccine vesicle may previously have attained. The diameter of the scar, provided that scar be circular, is of little moment. That of a sixpence, or small wafer, appears to me to be the largest which is compatible with complete security.

3. The perfect vaccine scar should be indented and radiated. It may be proper to premise, that the vaccine vesicle has a regular organisation (consisting of cells tied down by a central band) like that of variola; and it is certainly a mark of the perfection of the vaccine process, when the indentations and striae of the original cells remain to testify that the vesicle was uninjured in its progress. I am very ready to acknowledge, however, that these marks are not essential to the perfection of the vaccine cicatrix. I have seen several cases of the most highly modified chicken-pox after vaccination, where such characters in the scar have not been perceptible.—
(From a paper by Dr. Gregory in the *Yellow Journal* for May.)

V. *Beneficial Effects of Oxide of Sodium and Calcium.*

By J. G. F. HASSEL, M.D.

'CASE I.—In the month of December 1824, I was called to Robert Burdett, Esq. of a full habit, aged 60, whose constitution had been much impaired by luxurious living. I found the patient in a high fever, caused by a very painful carbuncle in his neck, about the size of a small plate. A practitioner having mistaken the case for a common boil, desired the patient to poultice the part for several days; this did not succeed. On my arrival, I found no less than seven or eight apertures scattered over the surface of the carbuncle, through which a dark-yellow, greenish, bloody, and irritating foetid ichor issued; and in less than twenty-four hours the inflammation had extended upwards over the whole occipital region, and downwards over all the cervical vertebrae and both scapulae; the result of which was, a rapid progress to a gangrenous state, and extensive sloughing of the integuments. Finding the patient on my third visit in imminent danger, I, without farther delay, made several deep incisions through the apertures and diseased integuments, and after a quantity of dark blood and foetid matter had oozed out, and been washed away with a sponge impregnated with a concentrated infusion of poppy heads, I fomented the affected part for half an hour with equal proportions of the same tepid infusion and Labor-

raque's liquid; and with the same mixture I dressed the wounds and sloughy parts. I also ordered the patient to take a draught at bed-time, composed of tincture of opium, 50 drops; antimonial wine, 30 drops; Labarraque's liquid, 15 drops; and cinnamon water, 1 oz. After these proceedings, the patient experienced not only a very comfortable night, but, to my utter astonishment, almost all the gangrenous parts came away with the dressings on the following morning; and after five or six applications more of the same mixture, the ulcer exhibited a most favourable aspect: a few emollient poultices were now applied, which brought away the remainder of the matter and sloughy cellular substance. The common dressing, due attention to the patient's bowels, and a generous diet, soon filled up the excavations in the neck with healthy granulations, and in less than a month he perfectly recovered.

CASE II.—In January 1827, a young woman named Josephine, aged 25, of a sanguine temperament, was admitted into the Bologne Civil and Military Hospital, which is superintended by two experienced medical practitioners, namely, Messrs. Gorée and Rouxel, both doctors of medicine and surgery. This patient was afflicted with a sarcomatous tumour, the size of a large orange, situated on the inside of her left thigh. Dr. Gorée proposed the removal of this tumour by a surgical operation, to which the patient not submitting, she was soon discharged. A few weeks after having quitted the hospital, she received by accident a blow on this tumour, with which she had been afflicted for upwards of a year: after this accidental excitement, the tumour inflamed violently, so much so, that the swelling extended over the whole thigh and knee, which caused great muscular contraction and deformity of the limb. This induced the patient to apply for re-admission into the hospital, where she was again received in the beginning of March. Independent of a proper medical treatment, the tumour was poulticed for several days, after which suppuration took place, a dark-coloured, fetid matter escaped through a small aperture on the lower part of the tumour, about two inches on the inside above the knee; but this natural opening (caused by an increased action in these parts) soon degenerated into a malignant ulcer and sloughing, which made a rapid progress both in the adjacent integuments and deep-seated muscles. On the 12th of March, Dr. Gorée made a large longitudinal incision through the diseased integuments and fascia, out of which more than two pounds of fetid matter were discharged. The smell of this corrupted ulcer was the most offensive that I ever experienced in practice. The cavity of the wound presented a most frightful and alarming aspect. It was fomented with a mixture of one part of the chloruret of sodium and twelve parts of tepid water, by which the putrid smell was subdued in a few seconds, to the great surprise of the attendants and patients present in the sick ward. The whole cavity of this enormous wound was filled up with fine, dry, soft French lint, over which two or three ounces of the concentrated chloruret of sodium were sprinkled; a large, thick compress and bandage completed the dressing, which was saturated with the

diluted mixture of the chloruret, in the proportions as above mentioned. On the following morning the offensive odour of the wound was considerably lessened, and a vast deal of foetid matter was again discharged. To the dressing adhered not only the sloughy integuments, but also a large mass of disorganised cellular substance, muscular fibres, and veins, which came away without much resistance, by hooking it out with the assistance of the finger. This corrupted fleshy mass weighed upwards of a pound. The wound was then treated as before, and the same plan was pursued for several successive days, until all the foetid matter was discharged, and the putrid smell entirely subdued. By this treatment the wound was converted into a simple and healthy one about the 18th of March; a rapid and healthy granulation soon filled up its extensive cavities: the patient's exhausted frame was likewise gradually recruited; and by paying attention to the digestive organs, and prescribing a light but nourishing diet, she soon recovered her strength and general health.

'Had such a powerful antiseptic as the chloruret of oxide of sodium been known in the years 1808, 9, and 10, when I was on duty under the orders of Sir William Franklin, in the General Military Hospital established then in the Jesuits' College at Messina, it would have been a great auxiliary in checking the sloughing process of the very dangerous and extensive venereal ulcers which were then prevailing in the General Hospital in Sicily. I remember having treated cases there of ulcerations after buboes, in which the sloughings extended over the parietes of the abdomen and the greatest part of the thigh, and which only yielded, with much difficulty, to the best and most expensive antiseptics known at that time: here the chloruret of sodium would have been a most admirable application.'

VI. *Articulation lost for many months from a Chronic Affection of the Stomach.* By G. STRAMBIO.

LUIGIA MAMMI, seventeen years of age, of a lymphatic temperament and strong constitution, experienced some disturbance in the functions of the stomach, towards her fifteenth year. Convulsions ensued; bleeding, purgatives, anthelmintics, and tonics, were employed in vain: the disorder increased, and the patient entirely lost the power of speech; she executed with ease all the movements of deglutition; her taste was perfect; her memory of words complete; and yet she could only utter some inarticulate sounds. There was no symptom of any affection of the mouth, of the tongue, or the pharynx: she only complained of an intolerable tightness in the region of the stomach, and more or less constriction of the larynx, according to the constriction of the stomach: some convulsive actions accompanied these symptoms. A year elapsed in this state before she recovered her health, when the loss of her mother induced a relapse: it went off, however, in a few days.

M. Strambio sees in this affection a spasmodic irritation of the

larynx, sympathetic with an irritation of the gastric nerves.—(*Bulletin des Sciences Médicales, Avril*—from *Giornale Critico di Medicina Analitica*.)

VII. Gangrene of the Lungs.

A CASE of this kind is related in the Nouvelle Bibliothèque for March, by M. Pichot. The patient, a man thirty-eight years of age, had had repeated attacks of a chronic gastro-enteritis, and on the 15th Sept. 1826, he came under M. Pichot's care. At this time, his emaciation was extreme, his countenance very anxious, his eyes deeply sunk in the orbits; hectic fever; tongue rather pale than red, and continually covered with mucus, which obliged him to spit out frequently. Intense thirst; abdomen painful, especially over the epigastrium. Respiration easy; no cough; but the patient complained of a burning pain between the shoulders and on the right side of the chest; the pulse was soft, compressible, and regular; urine scanty, and high coloured; sleep much disturbed. A soothing treatment was adopted; and till the 22d of September he appeared to improve. On the evening of that day he was attacked with a violent cough, which caused violent tearing pains in the back and chest; thick, brown, mucous expectoration, of an offensive odour, and very copious; no sleep all night. The next day, thirst insatiable, and so much less tolerable, that the patient dared not drink for fear of increasing the cough. He explained the coincidence of the cough with the swallowing of liquids, by an insupportable itching which he said he experienced in this organ as soon as the fluids arrived there; and this did not cease till, in consequence of the cough, vomiting had been induced, and the fluids contained in the stomach ejected. On the 10th of October, about three o'clock P.M. all these symptoms disappeared, and the pains of the chest were so much diminished that the patient experienced no other feeling than that of extreme weakness. He gradually sunk, and died on the 11th.

Examination of the Body, twenty-four hours after death.—

Thorax. Behind the cartilage of the true ribs, from the fourth to the seventh, a collection of pus was found, which, carefully examined, presented the following peculiarities. A false membrane formed a perfect cyst, in which the matter was enclosed: it was organised, and very delicate arborescent blood-vessels were discovered in it. Continuing the investigation on the right side, the lung was adherent through almost its whole extent to the pleura costalis: the adhesions being destroyed, the cavity was discovered to be filled with black and offensive liquid; the lungs was very tender, easily torn, and was disorganised by gangrene through a very considerable part of its volume. The diseased part occupied all the posterior portion of the inferior lobe of the lung from the fissure which divides the organ to its root. Both this and the left lung had evidently been inflamed.

The pericardium exhibited unequivocal traces of inflammation, and a factitious membrane had formed between the two layers.

The intestinal canal was filled nearly throughout with a black matter similar to that which was found in the chest.

VIII. *Complete Obstruction of the Jejunum by a Biliary Calculus.*

THE symptoms were those of strangulated hernia. On opening the body, the inferior portion of the œsophagus, the stomach, the duodenum, and the superior third of the jejunum, were distended by a yellow brownish liquid, which emitted a very fetid odour, and similar in appearance to what had been vomited. A biliary calculus, of a conical shape, about three inches long, and two inches in diameter at its base, and slightly enlarged about the middle, was fixed in the jejunum, just below its dilatation: its apex was directed towards the inferior part, and the intestinal parietes were tightly applied upon the calculus, the fluids not being able to overcome the obstacle; the superior portion of the intestine was an inch and eight lines in width; the valvulæ conniventes were partly effaced; the inferior portion was only an inch in diameter; the mucous tunic, stained yellow, and deeply injected above the calculus, was of a dark violet colour below it; the lower end of the small intestine and the colon were slightly inflamed; the mucous tunic of the stomach had the same appearances with that of the bowels; the ascending colon was completely adherent to the base of the gall-bladder: a perforation, which readily admitted the finger, established a communication between the cavity of the duodenum and that of the gall-bladder; a biliary calculus, of a triangular pyramidal form, six lines long, protruded into the centre of this aperture; its base was turned towards the duodenum; the circumference of the opening was smooth and uniform; the gall-bladder was hard, scirrhus, and of considerable thickness; the cellular tissue which united it to the liver was the seat of a chronic suppuration; a probe introduced into the gall bladder easily penetrated into the abscess; there was a little bile; the ductus choledochous was free; the ductus cysticus considerably obstructed, would not permit the introduction of a probe; there was a small aneurism in the descending aorta.—(*Nouvelle Bibliothèque Médicale, Mars 1827.*)

SECTION II. — INTELLIGENCE RELATING TO THE MEDICAL SCIENCES.

I. *Observations on the Clinical Instruction of the Parisian Medical Schools.*

CORVISART was the first French teacher who adopted the clinical method of instruction. As a taste for study and anatomical researches became more diffused, the places multiplied in which this kind of instruction was given; and the physicians of the different hospitals, availing themselves of the advantages of their situation, offered lessons to the pupils and to young practitioners, which were

the results of their experience and labour. Clinical courses were then commenced on all parts of medicine, on the diseases of old people and of children, and of women in the puerperal state; on mental disorders, affections of the skin, and syphilitic disorders; — courses with which the names of Pinel, Jadelot, Chaussier, Esquirol, Alibert, and Cullen, are honourably associated. The administration of the hospitals, desirous of increasing and sustaining whatever was connected with the advancement of science, favoured the formation of clinical establishments in every institution which was under their inspection; and it may now be said, that in all the hospitals in Paris there is not a single ward in which there is not a more or less detailed *clinique*, and of which all the interesting facts are not recorded and published. To say how much medicine has been advanced by these circumstances, would be to recapitulate all the progress and acquisitions of the science during the last twenty-five years; and we yet count among their results an emulation among the teachers, an ardent desire of instruction in the pupils, the most important discoveries, and works of the highest reputation, — all produced by a system which is at once the admiration and envy of our neighbours and of our rivals, who resort hither to procure, gratuitously, that instruction which is sold in their own countries for its weight in gold.

Among the elements essential to the advantageous establishment of a clinical school, some are of a personal kind and regard the professor, others are not always at his command. Of the latter are various conveniences, such as large, well-aired, well-lighted rooms, the temperature of which can be kept at all times moderate, and which are not exposed to noise or to hurtful emanations; a sufficient number of patients, with the power of selecting them, so as continually to keep before the eyes of the pupils examples of the different kinds of maladies; a well-appointed pharmaceutical department; a well-arranged kitchen, from which such food only is sent to the patients as is ordered; and a certain number of intelligent persons subordinate to the physician. But even these advantages, which become so great in the hands of an able professor, and so profitable to the pupils, are productive of no effect where the professor is not gifted with many qualities which are not often combined. A physician may be a very learned man, or a distinguished practitioner, and yet make a very middling professor. Besides the qualities which we look for in a physician destined solely to practise, and which the clinical professor ought to possess in an eminent degree, his duty especially requires others; for the former, although exercising important duties, does not incur the immense responsibility of the latter: he is only accountable for his personal acts; but the clinical professor is, as it were, multiplied to infinity, by the pupils who leave the school in which they have learned principles that are either salutary or dangerous.

A professor of clinical medicine should be well persuaded that he is always a conspicuous object, that each of his actions should be a kind of precept, and that he ought to present to his pupils an

example of every thing that is good. Amenitv, dignity and propriety of deportment, sound judgment, prudence, penetration, scrupulous exactness, a wise reserve, various knowledge, extensive experience, a simple and ready elocution, method and precision in explaining his ideas, and a strong and sincere desire to be useful, —such are the qualifications which have been united, in greater or less number, in those who have been most distinguished as clinical instructors; but the entire assemblage of which was never, perhaps, yet met with in any one individual. Some have been distinguished by the facility with which they recognised diseases, and, abusing this advantage, have too much neglected their investigation, practising medicine with a kind of constant divination, as if, to make use of a happy expression, we did not begin to divine always exactly where our knowledge ceased. Others, giving exclusive attention to certain points of science, seemed to forget that the object of clinical instruction is to form physicians capable of treating all kinds of diseases. Others, truly zealous, undoubtedly, and ardently desirous of being useful, but without sufficiently enlarged views, attached an importance to a minute and unprofitable relation of cases, and a repeated inspection of meteorological instruments, paying a very inadequate attention to the most important parts of the course. Others, fond of experimenting, exhibited very little judgment in the combination of therapeutic agents, and were consequently not enabled to appreciate their separate effects.

‘A man is not fit for the clinical chair who seems to have remained immovable in the general movement of the sciences, who delivers faulty and desultory lectures with disagreeable monotony, and is unable either to examine a patient in an orderly manner, to form an accurate diagnosis, to institute a rational treatment, or to proceed with any kind of method to the examination of a dead body. Nor can he be supposed likely to form useful practitioners, who is continually mixing up metaphysics with medicine, choosing with perverse singularity the wildest and most unintelligible parts of each system, and thus carrying into his practice the most dangerous instability united with the most fatal rashness, prescribing the most opposite measures, according to the fancy of the moment.

‘If it is important for any one to be unshackled by exclusive theories, it is surely so for the clinical professor; for it is in his practice that their just value can be appreciated, and what is well founded borrowed from each; whilst the exaggerated ideas, which are so natural to the human mind, are put aside, and the pupils be trained to that philosophical doubting which is so favourable to the advancement of the sciences. An attentive and scrupulous observer, he will neglect nothing which can aid the diagnosis, and will endeavour to associate the lesions of the different organs with the phenomena of diseases. It may be conceived that a professor of this kind, knowing how much the pupils are always disposed to carry the peculiarities of their master to excess, will not always be employing a hazardous and perturbing treatment; he will inculcate in his hearers, that *to doubt* and *to wait* are two rules of a more exten-

sive application in medicine than perhaps in any other science; he will remind them of the maxim which Corvisart caused to be inscribed in the clinical amphitheatre, an inscription which time has almost effaced, and which some of his successors have probably not seen,—“Never do any thing important in consequence of a mere hypothesis or simple opinion;” (*ne faites jamais rien d'important d'après une pure hypothèse ou une simple opinion*); and he will, in short, exhort them to follow in their practice the wise precepts of the Professor of Clinical Medicine in the University of Landshut. Dr. Schultes thus expresses himself: “*Methodo simplissimâ usi sumus, eò quidem studiosus, quò ratio medendi morbis monstranda erat tironibus, qui, quancumque sequantur methodum imitando plerumque excedere solent, ita, ut si viderent præceptorem huic illive medendi rationi indulgere eàdem vix non in omni morbo in ægrorum necesse et exitium impiissimè abutuntur. Monstrare discipulis quid alma natura in morbis valeat, non quid ferat; quid sibi petat, non quid eidem obtrudendum; nutus ejus speculari, intelligere, iisdem obtemperare; nec coërcere velle optimam rerum omnium matrem ad præcepta thesauriarum sæpiùs ineptarum; arti salutiferæ tot commentis et vaniloquiis, tot crudelitatibus et homicidiis dedecorata, pristinum, detractis quibus, deformabatur personis mysticis, splendorem restituere, nudâ tantùm veritate fulgentem: hoc tum docendi medicinam, tum medendi methodi primum nobis semper fuit et erit argumentum.*”

‘It is one of the duties of a clinical professor always to lay stress upon such notions as are elementary; for among those who hear his lectures, there are always many who are attending them for the first time; besides which, the mind is always so much disposed to pass matters lightly over, as to make it important to establish early habits of application and of exactness. To this end, it is not necessary to direct the attention to exclusive points; we repeat, that it is not the duty of a clinical teacher to make special researches; this task is better consigned to those who are not charged with the office of teaching; their duties are sufficiently interesting and extensive without them.

‘The ancient Faculty of Medicine (we speak of that which was violently dissolved in 1823) possessed but one chair of clinical medicine. Corvisart was the first who was appointed to it, and he performed its duties in a brilliant manner,—such, at least, is the tradition of those physicians who heard his lectures; and the tradition is probable, since he has descended into the tomb, and had lost all power long before his death. His successor, J. J. Leroux, whom we ourselves remember, followed his steps with such scrupulous respect, that, notwithstanding his honourable motives, he could not but be remarked as reducing clinical teaching to a sort of mechanical routine. M. Leroux was remarkable for his zeal, his precision, and his excellent intentions, to which we gladly give our tribute of praise; but he perhaps assigned too much importance to trivial things, to the detriment of some which should have attracted his attention. Professor Fouquier, who succeeded him, did not follow

his plan, but pursued one which he had already adopted in his private clinical lectures; and the constant increase of his pupils, up to the time of the dissolution of the Faculty, proved that he was an interesting and instructive teacher. When the Faculty was reorganised, the University, not consulting the real interests of the institution, deprived Professor Fouquier of the chair for which he was so well fitted, and gave him that of pathology. The number of clinical chairs was then increased to four, two of which were established at La Charité, and Laennec and M. Cayol appointed to them by authority. Laennec, whom the suffrages of his brethren would doubtless have called into the Faculty, evinced those talents in his lectures which he had already proved by other performances; but, if we may express our opinion without reserve, he was not made for a clinical professor. For, besides the interruptions necessarily arising from the infirm state of his health, he attached himself merely to the study of diseases of the chest, and to the application of mediate auscultation; and therefore collected into the wards such as were proper subjects for these researches, and passed lightly over the rest. He himself considered his course above the comprehension of pupils who were commencing their studies, and only calculated for physicians already well informed; and he therefore did not fulfil the object of the institution. It must be added, that, notwithstanding his great sagacity and rare talent for observation, Laennec was easily misled, and having once adopted an opinion, did not readily abandon it: he had a singular fondness for novelties, and even for things out of the common way; had a little too much reliance on empirical measures; and, according to the expression, aimed too much at extending the limits of possibility. The enthusiasm with which he adopted the use of tartar emetic in large doses in pneumonia, rheumatism, and apoplexy; the singular confidence with which he recommended what he called a maritime atmosphere to phthisical patients who were actually moribund; and other theoretical ideas not better founded,—were so many vindications of the opinion, that Laennec was not calculated for a teacher of clinical medicine.

‘Passing over the somewhat long interval which separated the death of Laennec from the nomination of his successor, and deferring our notice of M. Cayol, we shall now speak of the clinical system of M. Chomel. The analogy between our ideas of a good *clinique* and those put forth by him in his introductory lecture, leads us to speak of him in this place.

‘Professor Chomel thinks, with all enlightened and judicious physicians, that clinical study should precede that of pathology; and he insists on the great advantage of letting pupils become acquainted with patients before being subjected to the dogmatical study of diseases, and exercising their senses before exercising their understandings. His method of teaching is this:—at his clinical visit, which is made at eight in winter, and at seven in summer, he proceeds methodically to the examination of patients, both those who have been admitted the day before, and those who have been

some days in the wards; in all, he notices with the greatest exactness, and points out to the students round him, the morbid phenomena perceptible by the senses; and, far from trying to dazzle them by an affected penetration, he accustoms them to appreciate the exterior habit, the attitude, and physiognomy of the patient; to observe the state of the muscular powers, and of the intellectual and sensorial functions; to explore the digestive organs with great detail; and to verify, by percussion or auscultation, the different lesions of the lungs or the heart. He explains the inferences to be made from the state of the excretions, from the temperature of the patient, and the condition of the generative functions. He then gives his diagnosis, and the reasons for it, and shews the indications on which he establishes his treatment; whether he decides on the employment of active measures, or on the method of expectation. He then points out the manner of ascertaining the effects of what is prescribed, and guards the pupils from the error of ascribing to the medicines all the phenomena which follow their administration.

To the clinical visit succeeds the lecture, the materials of which the visit may be said to have formed. The patients recently admitted or discharged are first spoken of; then those who, having died, are to form subjects for examination; and lastly, those who have been some time in the wards, according to the degree of interest or importance of the cases. The professor here speaks more in detail and more freely than he could do at the bedside, discusses the diagnosis, and gives his opinion of the probable progress, duration, and issue of the malady: he explains the basis of his treatment, its motives, the effects produced or expected, and sometimes enters into a discussion concerning the medicines, and on the preferable preparations and best mode of administering them. M. Chomel dwells much less on theory than some professors of whom we shall have to speak: he knows that it is the peculiar use of clinical study to fortify the student against explanations, hypotheses, and inductions, to which it is so difficult not to give attention when we cease to observe facts. Under his superintendence, the dissections are conducted with the greatest care: the organs of which the affections were observed during life are first examined, and afterwards all the rest; the morbid specimens are carefully preserved, and lectured upon the following day.

All the clinical professors have acknowledged the importance of the practical instruction of the pupils, and that more is learned by acting one's self than by seeing another act. Corvisart founded a sort of practical school, on the model of the *cliniques* of Germany, from which great advantages resulted to the students, without any inconvenience to the patients. The different beds were allotted to the more advanced pupils, who were charged to draw up the cases of the patients occupying them; they examined the patients when admitted, to practise the different methods of investigation, to name the affection, and to lay down a plan of cure; and all this was done in the presence of the professor, who assisted the student if necessary. Besides this, the pupils were required to hold a sort of con-

sultation among themselves concerning the most interesting cases; one of them, representing the physician in ordinary, detailed the history of the disease, and explained the treatment already employed, to the rest, mentioning the results which had been obtained; a discussion followed, in which each gave his opinion, and a consultation was then drawn up. Sometimes a case was drawn up and presented for advice, as if it had come from a patient at a distance, and one of the pupils was called upon to give a written reply. These exercises, the object of which was to accustom the young physicians to the various duties they would have to perform, were enthusiastically promoted by Corvisart: under his successor they were less attended to, and they were subsequently altogether discontinued. M. Chomel deserves thanks for endeavouring to re-establish them, for their utility is very great: it is, however, to be regretted that the pupils do not feel more zealously affected towards them.'—(*From the Archives Générales de Médecine, Mars 1827.*)

II. Case of Acute Inflammation of the Spinal Marrow.

ISIDORE BENOIT, rag-picker, aged sixteen, living at Vaugirard, became a patient at the hospital Necker, in Paris, on the 3d of August, 1826, under the care of Dr. Honoré, who has published the following particulars of his case in the Archives Générales for March:—

'When he was admitted, I had a great deal of difficulty in obtaining from him any particulars of the commencement of his disease: he was not delirious, but he seemed unable to fix his attention, and to follow his ideas connectedly; he answered in monosyllables, and whilst I was asking my questions he seemed occupied with other things, and in a state of restless uneasiness, moving himself about continually as he lay in bed. I learned, however, that he had been ill three days, and that his illness had commenced with vague pains in the limbs, weariness, headach, and some diarrhœa.—The expression of his countenance was, moreover, changed; his face was yellowish, except the cheeks, which were of a lively red; the epigastric region and the abdomen were painful, and very sensible to pressure: the tongue was narrow, red at the edges and tip, and moist; the heat of the skin considerable; the pulse frequent and strong: there was also diarrhœa.

'I looked upon this as a case of peritonitis, rather characterised by the extent than by the intensity of the affection, joined with an inflammatory irritation of the gastro-intestinal mucous membrane; and prescribed demulcent drinks, spare diet; the application of forty leeches to the abdomen, the fomentation of the leech-bites being directed to be continued for at least six hours.

'The next morning, the 4th, the leech-bites had bled very abundantly, and continued to do so: they were not stopped till the middle of the day, more than twenty-four hours after their application. The patient gave no better account of himself than before, and continued to throw himself about in the bed: his face was pale; the skin had lost its heat; the pulse was yet frequent, but not

strong. On examining the patient, I found that the sensibility which I had yesterday supposed to be limited to the epigastrium and abdomen was universal, and so acute that I could not place my finger on any part of his body without causing the patient to cry out. This constant state of jactitation, and these movements, either of the whole body or some of the limbs, which seemed independent of the will, and purely automatic, together with the prodigious exaltation of sensibility, led me to think that I had been mistaken in my prognosis of the day before, and that the disorder was seated, not in the peritoneum, or mucous membrane of the first passages, but in the spinal marrow; and the sudden invasion of the malady, the rapidity of its progress, the intensity of the fever, and the multiplicity of the symptoms, caused me to regard it as a state of acute inflammation.

' The employment of the bath seemed strongly indicated; but the weakness of the patient, the paleness, the state of the pulse, and, more than all, the flowing of blood from the leech-bites, which to a certain degree continued, did not permit it; I therefore only prescribed diluting drinks. Understanding that the father of the patient was coming to see him in the course of the day, I left directions for an inquiry to be made into the circumstances which had preceded the entrance of his son into the hospital, and, if possible, into the causes of his malady. It was thus learnt that the young man had, on the 31st of July, plunged eight or ten times into the Seine, from the bridge of Jena, and that in the last plunge he had slightly hurt his left foot; not sufficient, however, to prevent his returning to Vaugirard, where he lived: it appeared that, in other respects, the account given by the patient was correct, except that he had omitted to state that he had been very much agitated the night before he came into the hospital.

' On the 5th delirium supervened; the patient cried or talked incessantly; his conversation was unconnected, and he did not reply to any questions: in other respects, he remained the same. I prescribed mercurial frictions, the fourth part of an ounce being rubbed in four times in the twenty-four hours. My intention was to act with energy, by this means, on the absorbing system, the only method of revulsion which appeared to me to be practicable, considering the sensibility of the integuments and the alimentary canal.

' On the 6th all the symptoms had increased, excepting the diarrhœa: the frictions had produced no effect on the mouth; but, on account of the general painfulness, they had necessarily been made very gently, little more being done than to spread the ointment on the skin: I caused them to be continued in the same proportion.

' On the 7th there were extreme agitation, almost continual cries in consequence of pain, involuntary movements, frequent jactitation of one of the limbs or of the whole body; continual change of posture, the patient, however, always lying on his back: the upper part of the trunk was frequently almost thrown out of bed, and as if

abandoned to its own weight. The face had again become flushed, the pulse had regained its frequency and force; the skin had become hotter. I prescribed bleeding from the arm to twelve ounces, a bath continued for a long time, and to be repeated if it was well borne; and twenty drops of laudanum to be given at four times in a four ounce gum mixture.

'On the 8th, no change. On the 9th, prostration; loss of all the senses; death about two o'clock in the afternoon.

'*Examination of the Body, sixteen hours after death.*—*Head.* The brain and the membranes were healthy: the cerebral substance had perhaps rather more density than usual, at least at the patient's age.

'*Spinal Marrow.*—The membranes which enclose the spinal marrow were in the natural state; and the spinal marrow itself appeared equally free from disease at its upper part; but on a level with the seventh cervical pair, it was manifestly softened and infiltrated with pus: this lesion extended as far as the fourth or fifth dorsal pair: its condition was unchanged in the rest of its extent.

'*Chest.*—The lungs were healthy. The pericardium adhered to the heart throughout, by means of a very extensible, lamellar, cellular tissue. The heart was of the natural size.

'*Abdomen.*—The organs contained in this cavity presented no appreciable change: the bladder was distended with urine.'

Observations.—This is a very interesting case, although the cause of the affection by no means appears to be explained. The peculiarity of the French school may be here instructively observed. Nothing can equal the diligence with which the case is watched, as it were, to afford a lesson in morbid anatomy and pathology. But, in the mean time, what becomes of the patient? The physician is satisfied that there is acute inflammation of the spinal marrow, and prescribes *des boissons délayantes*; water gruel, lemonade, ptisans, and such formidable opponents of an acute and serious disorder! Again, we say, if this is the price we are to pay for pathological anatomy, let us remain for ever in ignorance, and go on treating symptoms in the old way. It is not, however, necessary to run into extremes; and we trust it remains to be shown in this country that the most minute acquaintance with morbid structure does not necessarily draw away the mind from those measures on which health and life depend.

III. *Case of Poisoning by Sulphuric Acid.*

In the month of October last, a girl, twenty years of age, of a dark complexion, robust, and of a violent temper, attempted to swallow three ounces of the sulphuric acid of commerce; the pain it caused prevented more than two or three spoonful reaching the stomach. Vomitings and convulsions succeeded; and her loud cries attracted the neighbours, who tried to give her cold water, but were unable to do so in consequence of the opposition to deglutition arising from spasmodic constriction of the pharynx. In the evening she was seen by a physician, who prescribed mucilaginous drinks, and a large

quantity of milk; eight leeches were applied to the left side of the neck, and emollient fomentations to the epigastrium. The leeches produced no relief; the fomentations could not be borne; and it was with great difficulty and with excessive suffering, that a few spoonful of the prescribed drinks were swallowed. Notwithstanding these circumstances, the agitation and suffering of the patient became less on the following days, and on the fourth day after the accident she was seen by Dr. Lebidois fils, by whom the case is reported.

She was lying on her back when he was called in to see her; the trunk and lower extremities constantly motionless; the face pale, sunk, and with an uneasy expression; the lips closed, and disfigured by round brownish eschars; the tongue was soft, moist, and white, as well as the palatine arch; the fauces and pharynx of the deepest red colour, without eschars. A deep-seated and agonising pain was felt along the whole neck and chest, from the throat to the stomach; it was increased by pressure, but still more by deglutition, by cough, or expectoration, by talking, and even by sudden turning of the head. The sensibility of the epigastrium was so great that the application of the hand, or even the weight of a single coverlet, could not be endured, nor the fomentations. She continually threw the clothes off the stomach, as if for the purpose of coolness, and scratched it gently, as if she felt some pruritus there. When the mildest kind of fluid was conveyed into the stomach, nausea was excited, as well as pain, the consequence of which was an increased repugnance to all kind of drink. The abdomen was soft, and without heat; the pulse small, feeble, regular, not frequent; the respiration slow, tranquil, and wholly thoracic; voice very low, *soufflée*; and there was great unwillingness to speak; the skin was soft, cool, and not particularly dry; the extremities were cold; sleep not profound or frequent; intellectual powers undisturbed.

On the succeeding days the depression and taciturnity were less; some spoonful of broth were swallowed and retained. On the ninth day the eschars on the lips had disappeared, and the little wounds left by them had cicatrised: the pains in the throat, neck, and epigastrium, were less, but broth could only yet be taken in the smallest quantities: emaciation and weakness rapidly increased. She was in this state, and without any febrile symptoms, when a most fatiguing cough began to deprive her of sleep, and greatly increased her exhaustion. She died fifteen days after the poisoning.

Examination of the Body twenty-seven hours after death.— There was slight redness of the fauces, the pharynx, and the upper part of the larynx. The œsophagus was so softened that it was torn in the attempts to detach it; its inner surface, from the guttural to the cardiac orifice, was of a cherry redness; near the latter there were irregular whitish bands, evidently marking the formation of cicatrices. The inner surface of the stomach presented various alterations: along the great curvature, from the pylorus to the cardia, it was sprinkled with large patches of a deep red colour,

covered with mucus of the colour of wine: in many places its epidermis was lost, and it was covered with great patches of a deep red colour, and appeared to be in a state of suppuration: in other places there were whitish and tense bands, directed in different ways, indicating cicatrices already formed. Near the pylorus there was a grayish membranous layer, resembling that which is formed on old blisters, covering a considerable extent of the mucous membrane,—the membrane itself, underneath, being intensely red. The small intestines were purple, contracted, and filled with bile and mucus mixed, the consistence increasing towards the cæcum. The large intestine was quite empty, and so contracted as not to be larger than the œsophagus. The heart was firm, about twice as large as the fist of the subject: the parietes, particularly those of the left side, thick and firm. The lungs were dense, reddish, and much engorged in the posterior portion: the bronchial mucous membrane was of a vinous colour, and covered with an abundant puriform mucus. There was nothing remarkable in the other viscera.—(*Arch. Gén.*)

This case is given, among others, with the intention of shewing that gastritis may exist to a very high degree without necessarily producing fever; and, consequently, to prove that the essential cause of fever cannot be gastritis. It is, however, interesting, as exhibiting the phenomena of poisoning by a fluid which produces such intense local effects. The treatment of the case by the narrator is not given.

IV. *Case of Mollities Ossium.*

AN example of this rare disease is recorded in the *Journ. Univ. des Sc. Méd.* for November last. A woman, aged fifty-three, inhabiting the most unhealthy part of the plain of Forez, and previously weakened by various privations, was affected, in 1821, with a quartan ague, and treated (on Rasori's plan, as it would seem) with drastic purgatives, under the use of which she became worse. In 1822, the poor woman presented herself at the *Hôtel-Dieu*. All the long bones were at that time softened to such a degree that along two-thirds of their extent they yielded to the pressure of the finger like wax, and were bent by the mere contraction of the muscles. The first care of the physician was so to dispose and guard the limbs as to prevent the severe pain which the slightest motion of them occasioned. The urine was carefully examined: it was found charged with mucus; contained very little albumen; very little urea; no urate of soda; little phosphate of soda; but much calcareous phosphate. The patient's condition seemed to improve a little, with attention to diet and regimen, small doses of bitters being given, and some paregoric at night: but the hot weather, and confinement to the hospital, brought on acute enteritis, which proved fatal. When the body was opened, marks of strong inflammation were found along the whole of the gastro-intestinal mucous membrane. All the bones of the extremities, and even some of the ribs on the right side, were entirely softened. About a third of each

femur presented anteriorly a soft substance, traversed by many blood-vessels; and posteriorly a membranous pouch, into which the medullary portion seemed to be converted.

V. Cicatrisation of Ulcers promoted by Chloruret of Sodium.

M. LISFRANC some time ago announced, that the prompt cicatrisation of ulcers might be obtained by the application of the chloruret of sodium. At a meeting of the Surgical Section of the French Academy of Medicine, held in January, he exhibited a portion of skin taken from the leg of a man who was six months previously cured by this means, and subsequently died of pneumonia. The application produces a plastic exudation on the ulcerated surface, which very speedily becomes organised: it is at first red, and afterwards becomes particularly white. This exudation resembles a piece put in to close the ulcer, the borders of which may be said to retain their situation. This circumstance is, in M. Lisfranc's opinion, very advantageous; for as the skin almost repairs the whole loss of substance it has undergone, it becomes larger than an ordinary cicatrix, and the cure is consequently more complete. The dissected cicatrix shewn by M. Lisfranc is white when divided, thin, and resembling the false membranes of the pleura and peritoneum: it was produced in this instance in ten days, and the ulcer had existed a year and a half.—(*Revue Médicale*.)

VI. Medical Casuistry.

M. COSTA proposes the following case to the French Academy. A woman, before becoming pregnant, had an aneurism of the heart, of which the symptoms were greatly aggravated by the pregnancy. In the seventh month she seemed continually threatened with suffocation; the lower extremities were œdematous; she could not lie down, &c. At seven months and a half, spontaneous delivery took place, and the infant survived. As the life of the mother was preserved by this premature labour, M. Costa asks, whether, in similar cases, it would not be lawful to promote abortion? Commissioners were named to consider and reply to this question; but we have not seen their decision.

In all cases in which it is manifest that delivery at the full period would be incompatible with the life of the woman, we imagine the propriety of procuring abortion to be incontestable. For the probability is, that the child will not be born alive; and in these circumstances, the certain life of the mother is to be preferred before the uncertain life of the infant. But the difficulty consists in determining the existence of such painful cases, and in setting limits to the accommodating power of nature, by which very singular difficulties are often overcome with relation to the processes on which the continuance of living beings depends.

VII. Theory of Vision.

M. FOURNIER DE LAMPEDES maintains, in a memoir read to the French Academy of Sciences, that Newton and Descartes were

deceived on the subject of the mechanism of vision, as well as the physiologists by whom their opinions have been copied, in supposing that the luminous rays paint objects *reversed* on the retina, in consequence of a simple crossing which these rays undergo in the eye. According to him, objects are painted on the retina by the luminous rays in their true position, and such as we see them, in consequence of undergoing two crossings instead of one before they reach the retina; that the first crossing taking place at the pupil, the luminous rays reach as they diverge the anterior face of the crystalline lens; that they are here strongly converged, and that a second crossing is produced behind it in the middle of the vitreous humour, so that the rays at last represent objects as they are upon the retina.—(*Revue Médicale.*)

VIII. *Hypertrophy of the Stomach.*

M. BOUILLAUD, in a paper on this affection in the *Revue Médicale* for March, makes these observations:—

‘ 1. Hypertrophy of the muscular membrane of the stomach occurs in certain phlegmasiæ of that organ.

‘ 2. This hypertrophy may be considered as the result of a nutritive irritation of the tissue affected; but the intimate nature of the irritation is not more understood than that of the nutritive act itself in a state of health.

‘ 3. Contraction of the pyloric orifice is not the immediate or constant cause of this hypertrophy, but constitutes one of its determining or occasional causes; for, by opposing an obstacle to the progress of the alimentary matters contained in the stomach, it becomes the source of a redundancy of action and excitation in this organ. In this case, as has been well remarked by M. Louis, the muscular hypertrophy of the stomach is effected by the same causes which lead to hypertrophy of the heart, when its orifices are narrowed; or that of the bladder, when its neck is contracted, and it does not easily get rid of its contents.

‘ 4. Hypertrophy of the muscular membrane of the stomach is generally accompanied by dilatation of that organ, as hypertrophy of the heart in most cases coexists with aneurism, or dilatation of that organ. And the dilatation of the stomach, in the cases in question, is generally the consequence of a narrowing of the pyloric opening, as aneurism of the heart is most commonly purely a mechanical effect of the obstacle existing in the heart’s orifices. Sometimes, however, dilatation of the stomach exists without any contraction of the pyloric orifice, of which examples are given by M. Andral.’

IX. *Diseases of the Ear.*

M. DELEAU has laid before the French Institute an instrument invented by him to convey air into the internal ear in cases of deafness,—an operation said to have excellent effects: and also to extract pus, &c. by creating a vacuum, which we suppose is capable of application to the external as well as middle portion of the audi-

tory apparatus. The effect first mentioned, that of conveying air through the Eustachean tube under the tympanum, is produced, in a case which has been recently communicated to us, by playing the flute: the individual is deaf to conversation, but can hear the lowest tones of his instrument with the greatest exactness. Dr. Dulau's instrument, however, admits of much more extensive application: he proposes that it should be used, by varying some of its appendages, to convey air into the lungs, or water into the bladder; or to extract hurtful liquids from the stomach.

X. Statistics.

THE result of an accurate comparison of 13,000,000 of births in and near Paris, distributed into months, has shewn that, with the exception of the month of March, the epochs of the *maximum* and *minimum* of conceptions and births are regulated by the succession of seasons and the annual varieties of temperature: the distribution of the marriages into months did not shew any sensible connexion with that of the conceptions. The greatest number of births is in February, the smallest in December: the small number of births in December seems to depend on the abstinences of Lent, which falls in March.

The height of the men is greater in the city of Paris than in the rural arrondissements: the number of men furnished fit for service is greater in the rich than in the poor arrondissements.—(*Rev. Méd.*)

XI. Identity of Vaccine and Varioloid Matter.

M. GUILLON, vaccinator of the canton of Saint-Pol-de-Léon, (Finistère), being in want of vaccine matter during the prevalence of small-pox, took some matter from the arm of a young lady who was affected with the varioloid disease, or small-pox, after vaccination, at the fifth day of the eruption, and with it inoculated a child at the breast. To his surprise, this inoculation produced six fine *vaccine vesicles*. Wishing to verify so singular an occurrence, and fearing to be deceived by circumstances, he took matter from the arm of the infant at the ninth day, and inoculated forty-two children with it, all of whom had the vaccine disease: these, in turn, furnished vaccine matter for a hundred more; and the inoculation, which was performed before many medical men and public functionaries, was followed by the same results. The same experiments have been repeated by M. Guillon with the same effects; and he mentions, consequently, the identity of the varioloid and vaccine matter, and asserts that both afford preservation from small-pox.—(*Revue Médicale.*)

XII. Prize Questions.

THE Society of Medicine at Caen propose the following prize questions:—

Is miliary fever a disease *sui generis*, or only the result of a visceral irritation, or some other pathological state?

What are the principal diseases of which it may be a symptom,

a complication, or crisis; and what are the modifications it may communicate or receive?

Have seasons, climates, localities, or even therapeutic measures, any influence on its development or severity?

To trace the history of miliary fever, and the best curative and prophylactic treatment?

The answers to these questions must be supported by clinical observations and anatomical researches.

The prize to be a gold medal, value 200 francs.

The essays must be sent free of postage before the 31st Dec. 1827, addressed to M. Lafossa fils, secretary of the society.—(*Revue Médicale.*)

THE Society of Practical Medicine of Paris also propose the following questions:—

Question for 1827.—To determine, in the present state of science, the nature, seat, and treatment of scrofula?

Question for 1828.—To determine the different cases of disease where the employment of cold is useful, and those where it is dangerous; and to particularise the different modes of applying it?

The essays to be addressed, post free, to M. Pascales, secretary general, Rue Charteraine, No. 36, before the 1st of November of each year.

The prize for each question 300 francs.—(*Ibid.*)

XIII. *Case of Intermittent Epistaxis.*

— BLANCK, aged twenty-eight, a house painter, had been subject to slight epistaxis from his youth, particularly in summer, or when his work was greater than usual; the attacks seldom lasted more than five minutes, or at the utmost a quarter of an hour. In 1826 he had gonorrhœa; during which affection, and for four months afterwards, the patient had no epistaxis: he was then attacked with it in a more profuse degree than before; the attacks were repeated every day to a great extent, and produced great debility. At this time he became a patient of the Hôtel-Dieu, and Professor Recamier observing, or fancying he observed, an intermittent type of the disorder, prescribed the sulphate of quinine, twelve grains in three doses; lemonade, with *eau de rabel*, (sulphuric acid and proof spirit); a grain of extract of opium being also taken at night.

This case is related as an example of intermittent epistaxis cured by quinine; but on reading the report of it, drawn up by M. Martinet, several discrepancies appear. The epistaxis occurred daily, night and morning, for four days; and although its regular recurrence night and morning may seem to justify the term intermittent, it cannot be looked upon as more so than the morning and evening paroxysms of a *continued* fever; nor, perhaps, any more than the latter periodical phenomena, justificatory of a recourse to the sulphate of quinine. The quinine does not seem to have been continued more than two or three days, and the hæmorrhage continued

to recur: the nostrils were then plugged; the epistaxis continued, but each return was less severe; and in about a week it wholly ceased.—(*Revue Médicale.*)

XIV. Medical Studies.

THERE have been, as our readers well know, some very curious and not very gentlemanly remarks lately made upon the present conventional divisions of the profession, and to these have been added some dissertations on the proper method of studying medicine and surgery. In the said dissertations it has been very properly maintained, that these sciences, to be well understood, require a very extended and varied education; that, with respect to each other, they acknowledge the same principles, and cannot be advantageously, nor even thoroughly, studied separately. To all this we, of course, can offer no objection, though we by no means join in the mean and selfish, but most erroneously selfish wish, of abrogating the arrangements in practice. There are many very excellent reasons, in our mind, why both the public and the profession are benefited by the present division. To originality, however, none of the late ‘charmers’ have any title; not even he who, with a *naïveté* so fascinating, claims both the first promulgation of the opinions and their more forcible annunciation. The truth is, that there are two tracts of Hoffman which will sufficiently overturn all these claims, and prove that our forefathers were not quite so destitute of common sense as their arrogant and far less perfectly educated descendants are willing to believe. We have said ‘less perfectly educated’ advisedly; for, compared with the advanced state of knowledge, the information of the present is far less accurate than the information of the past age. The titles of Hoffman’s tracts to which we refer, are, ‘*Dissertatio de Studio Medico rectè pertractando, et ejus probatissimis Auctoribus; primum edita anno 1726:*’ and ‘*Medicus Politicus, sive Regulæ Prudentiæ, secundùm quas Medicus Juvenis studia sua et vitæ rationem dirigere debet, si famam sibi felicemque praxin et citò acquirere et conservare cupit.*’ The first of these was published in 1726, and is confined to the consideration of the proper course of medical studies. In it he expresses the necessity of *polite literature, of mathematics, chemistry, botany, anatomy, surgery, &c.* forming a component part of a physician’s education; and he mentions the principal authors who had at that time written upon the subject. The second tract comprehends the first, in some degree embraces medical ethics, and inculcates the general rules that should be observed in treating diseases at different ages and under different circumstances. It is divided into several parts, each part is subdivided into chapters, and the chapters into rules. In the fifth rule he says, ‘*medicus sit philosophus,*’—a physician should be a philosopher,—and by philosophy he means, first, moral philosophy, in the common acceptation of this term, the investigation of the mental phenomena, the influence of the passions, &c., and the use to be made of this knowledge by the physician; for he says, if these things are well understood by the physician, he will be able

to restrain those evils which flow from unbridled passions, not by medicine only, but by appropriate moral management,—‘*Quæ si intelligat medicus, non herbis solùm, sed etiam verbis atque consiliis, compescet plurimorum affectuum ex ejusmodi cupiditatibus pravis producentium effrena mala.*’—Natural philosophy he divides into natural history and natural philosophy properly so called, and affirms the necessity of all the divisions being studied by the physician. It is rather curious, that, with respect to languages, he recommends nearly the same that were noticed by Dr. Duncan in a late number of the *Edinburgh Journal*. He wrote, it is to be remembered, for German students, and after insisting upon Latin, he recommends French, English, and Italian. Greek should be cultivated by him who wishes to be a learned physician,—‘*Tandem quoque Græcam eruditus calleat medicus, ad ornamentum,*’—otherwise it is not absolutely necessary, because the medical Greek works have been translated into Latin. He cautions students against considering the acquisition of a language of any value in itself—it is only the means of knowledge;—‘*In hactenùs enarratis linguis nulla quidem consistit eruditio, si scilicet in re considerentur, constituunt tamen medium ad aliorum eruditionem nos perducens.*’ Anatomy is as necessary for the physician as the surgeon, and the former is deservedly scorned who is inferior to the latter in this science. *Materia medica*, of which many of our surgeons know little, and appear to care less, is also thought a necessary accomplishment of a physician. Whether rightly or not, the gentlemen who have lately favoured the public with their lucubrations on this matter may be left to decide.

It is scarcely necessary to quote from this tract the remarks regarding the ordinary studies of medicine, such as pathology, the study of diagnosis, the treatment of diseases, &c.; the object of our present notice is merely to shew the gross deceptions that are attempted to be practised when the truisms to which we have referred are palmed forth as original. Surgical and medical science are united; surgical and medical practice are separated. But while this is the fact, it ought to be remembered that the science of surgery is altogether the offspring of medicine, and that the constitutional management of surgical complaints was always intrusted to the physician alone; and though, for the convenience of the public, this arrangement has been altered in private practice, it is still pursued to a considerable extent in hospitals. Nor is surgery slightly indebted to physicians. Physiology, to which the advance latterly made by surgery is mainly indebted, was for many years almost exclusively cultivated by this class of medical practitioners; and we owe to Dr. Mead the only great improvement that has yet been made in the operation of tapping for ascites. Till his time, paracentesis was not only dangerous, but almost constantly fatal. Mead suggested the cause and the remedy, and from that time the operation has been always innocent.

We have no intention of pursuing this subject farther than we have done. It is sufficiently apparent, that the really learned part of the profession have always upheld the necessity of a more com-

plate education than is generally bestowed; and it would have been far more becoming in a certain lecturer to have proceeded in the same rational and modest manner of enforcing this necessity, than to have dealt out as he has done unprovoked sarcasms upon a single class of medical practitioners, many of whom are equal to himself in abilities and information, and few of whom, we trust, would exchange the rank they hold in society for the apparent government of, but the real subservience to, a mean, vulgar, and slanderous faction.—EDITORS.

XV. On the Pulse.

DR. JULIUS RUCCO proposes to publish by subscription a work upon the pulse, and he has requested us to give insertion to the following account of it. It would not be fair to make any observations upon it at present; and we give it therefore without remark.—EDITORS.

‘Of all the applied sciences, that one is unquestionably the most useful, which has for its object the preservation of man’s health, and the prolongation of his existence. The greatest physicians of antiquity confined themselves solely to observations, and to the recording the results of such observations in their writings, nor as yet thought of raising upon these isolated facts a body of doctrine calculated to enlighten the students of their difficult art upon its general principles. The numerous data, however, thus furnished by the annals of practical medicine, at length suggested the utility of a theory; and intelligent men, in times nearer our own, devoted their talents to the composition of general treatises, and to the more immediate instruction of those who prosecuted the physical study of man.

‘Every branch of this science, with the exception of sphygmica, has been so clearly elucidated by practical writers, that it would be difficult to point out one which has not been treated upon with all the precision of rigorous investigation, and all the perspicuity of enlightened philosophy.

‘Among the writers who have most contributed, by their classical works, to accelerate the progress of practical medicine, we must reckon those who in the last century were engaged upon one of the most important branches of pathology,—we mean sphygmica, or the science of the pulse. But it must be confessed, that if, on the one hand, our obligations are due to men of superior talents for having published their observations upon a portion of science so useful, but so often neglected, and still more frequently despised, on account of its abuse; if to them we are indebted for seeing sphygmica again brought back to more fixed principles, and treated with greater respect than it had been before for many ages; on the other hand, it must be admitted, that as the observations upon which their theories are founded are entirely local, so their treatises will be local also; calculated to elucidate the state of a diseased pulse in one particular country, rather than to form the groundwork of a general theory applicable to every nation and every climate. Thus Solano’s observations refer exclusively to the Spaniards, and cannot therefore

be properly applied to any other people. Those of Borden are confined to the diseases peculiar to France; those of Cox and Fleming to England; those of Waschtius to Germany; while the remarks of Gandini and Cirillo are deduced from different pulses which they observed among the Italians; and so of the rest.

‘But this consideration is not the only one which induces us to conclude, that, notwithstanding the labours of these meritorious writers, a general theory upon the science of the pulse is still wanting. We would also point out another lacuna, which is to be found in the greatest number of the treatises upon *sphygmica* yet published. Most of the able physicians who have devoted their attention to the study of this art, have, it is true, considered the pulse in its pathological state, but have not ascertained all its various modifications and gradations which necessarily result from the individual's sex, age, constitution, and many other circumstances, both permanent and accidental, all of which, however, are worthy of attention, inasmuch as they exercise a determined influence upon the character of the pulse when diseased.

‘Let it be further observed, that most of the physicians who have treated of *sphygmica*, have confined their researches to some branches only of that science. Thus some, such as Solano, Nihell, Borden, Michel, and many others, have spoken solely of critical pulses; whilst Fouquet, and a few others, have treated almost exclusively of organic ones. It became therefore a desideratum to examine with greater nicety the pulses that are observed in chronical and acute diseases, when the latter are unaccompanied by local affections, and followed by no crises, and to unite those pulses with the organic and critical ones in one regular system. This has been precisely the course adopted by the author of the work here announced. In short, he has extended the ideas of Fouquet upon *organic* pulses, and those of Solano upon *critical* ones, and collected into a systematic treatise the observations of his predecessors, at the same time adding his own, some of which relate to particular facts, while others are the result of the regular study he has made (during his travels) of climates, constitutions, and various other circumstances which naturally affect the pulse: and all that he advances in his treatise is supported by observation and experience, and the authority of many celebrated physicians.

‘The work will consist of two volumes octavo, containing more than four hundred pages in each volume. The first will treat of the first lines or general principles of *sphygmica*, and of the physiological state of the pulse; that is to say, of the variations, forms, gradations, and modifications of the natural pulse, as well as of the irregularities or anomalies which are peculiar to it sometimes even in a state of health. The second volume has for its object the examination of the pathological state of the pulse. In this second part of the work the author exhibits the true character of *diagnostic*, *organic*, and *critical* pulses, by the assistance of which the true *diagnosis* and *prognosis* of the various diseases of the human body, and their proper medical treatment, may be easily known.’

XVI. *London University.*

THE first stone of this Institution was laid on Monday the 30th of April by his Royal Highness the Duke of Sussex, in the presence of a very large and unusually respectable assembly of people, whose animated plaudits sufficiently testified the interest they took in the ceremony. On the platform with the Royal Duke were most of the members of the council of the University, with their friends, including some of the greatest names of which England has to boast. A most appropriate prayer was delivered by the Rev. Dr. Maltby, and an address to the Duke of Sussex was afterwards most impressively spoken by Dr. Lushington, to which his Royal Highness replied in a brief but particularly distinct and manly speech, towards the close of which he evidently spoke with a feeling warmly participated in by the hearers. The ceremonies of the foundation, and the proceedings at the dinner on the same day at the Freemasons' Tavern, were reported in the public papers, and it is not our intention to detail either at any length. The latter was attended by at least five hundred persons, and perhaps so large a company of men of intellectual character has seldom been collected together, comprising, as it did, not only some of the most eminent public characters, but many persons of high attainments in all branches of science; besides a great number of the members of the professions of law and physic. Nor were the proceedings of the evening unworthy of the character of the company. The Duke of Sussex was in the chair; and the mingled dignity and condescension, or we may say, good humour, with which the Royal Dukes are well known to discharge offices of this kind, were very conspicuous in the whole of his deportment. The character of the events just at that time taking place connected with our domestic policy doubtless communicated an occasional feeling to the assembly somewhat of a political nature, but only so far as such feelings were associated with the cause of all that is interesting to mankind. Thus the health of his Majesty was certainly not drank with less enthusiasm than usual; and the title of Lord High Admiral, recently acquired by the Duke of Clarence, was received, when uttered by the royal chairman, with an uncontrollable burst of pleasure. Thus, too, the noble Marquis of Lansdowne's name was hailed with the greatest enthusiasm; and when Mr. Brougham rose to address the company, the applause with which he was received was so great as to make it not very easy for him to commence his discourse. At the upper table we observed near the chair, the Dukes of Norfolk and Leinster, the Marquis of Lansdowne, Lords Auckland, Ebrington, and Nugent, Mr. Brougham, Mr. Cam Hobhouse, and many other persons of distinction. The warm reception of Mr. Brougham's name, both in the morning and at the dinner, was a tribute most justly due to the unceasing exertions of that gentleman in the cause of the Institution which those present were met to celebrate; and we wish we could do justice to the surpassing eloquence of the speeches he delivered on this occasion.

He took a rapid retrospect of the difficulties which had surrounded the founders of the University when such an institution was first proposed, and of the opposition which had been made to it: he vindicated himself, in glowing language, from harbouring any little hostility to the Universities of Oxford and Cambridge, for the studies taught in which he had all his life, and amidst all the distractions of business, felt an unceasing attachment; he enumerated some of the great men of whom each of those places had to boast; dwelt very lightly on any possible faults that might have crept into them; and did ample justice to the liberal and enlightened feelings which were every day becoming more conspicuous within their justly venerated bounds. He alluded then more particularly to the duties of the professors in the London University, and stated that the lectures would be continued for nine months in each year, and that a system of examinations would also be pursued, by which the advancement of the students would be promoted. Mr. Brougham spoke slowly, and with great distinctness; and whether we consider the occasion, the subject, the audience, or the speaker, it may be said, that perhaps a more interesting, and certainly a more beautiful, oration, was never delivered on any occasion.

Speeches were made by most, we believe by all, the other noble and distinguished persons whose names we have mentioned, as well as by several other members of the council, and by the Rev. Dr. Cox, the secretary; and we think it was observed by the latter, that although some of the enemies of the University had represented it as merely one of the Joint Stock Companies of the day, it was to be remarked, that, notwithstanding all the agitations of the monied world during the last year, *not one* share had ever been in the market.

We consider the foundation of an University in London as an object of interest to the medical profession, not merely because it will comprise a medical school, but because it will facilitate the acquirement of many branches of knowledge which English students have always found it very difficult to become acquainted with. We trust the character of the University will be in every way worthy of the great capital of which it will form one of the finest architectural ornaments, and of the great country in which it is founded; that from thence, learning, science, every kind of knowledge, in combination with carefully cultivated principles of morality, and of a religion which, if not guarded by oaths and college statutes, will not be the less sincere and enlightened, may be diffused throughout the land, to the perpetuation of the proud rank which Englishmen have long maintained amongst nations, and to the preservation of all that is valuable in our national character, and in those institutions which it is our just boast that we derived from the courage and wisdom of our ancestors.

XVII. *State of the Sick Poor.*

It is gratifying to us to be able to state that the attention of practitioners in various parts of the kingdom has been very effectually

roused by the correspondence now taking place with the Warwickshire Committee. There was reason to expect that this measure alone was wanting to draw abundant information from various sources; and this expectation has not been disappointed. Persons of great rank and consideration have not thought the subject undeserving of their attention; and in the medical profession some of the most respectable provincial physicians and surgeons, by whom the evils of the present system of farming the parochial poor are much better known than by those who reside in the metropolis; have replied to the secretary's inquiries at considerable length, and have offered valuable suggestions. The difficulty in the way of carrying on the correspondence has been removed by the voluntary offer of such members of the committee as are in Parliament to frank the whole of it. As, however, the number of persons applied to is very great, and it is desired to omit as few as possible of those from whom useful information is to be expected, the replies already sent will not be particularly noticed until all the answers are received. A report will then be made by the Committee, and such further steps taken as may seem expedient, or as may be dictated by the general character of the letters sent to the secretary.

Thus we trust this most essential branch of reform is at least likely to be kept in view; and that arrangements more effective and humane as regards the sick poor, and more creditable as regards the medical practitioners, will, in the course of a year or two at the furthest, become general all over the country. We really think that the members of the profession are bound to promote such arrangements, not only by every feeling of professional honour, and every consideration of humanity, but by a just sense of their duty to the society in which they live, the safety and happiness of which can never be permanent under institutions which create in a very large class of the people, and all over England, a constant feeling of discontent. It is surely wise at once to remove an evil to which the rising and better-educated generation of labouring poor will in all probability not submit; particularly when it is conceived that this evil not only presses severely upon them, but confers no kind of benefit on any description of persons in the kingdom.

XVIII. *National Vaccine Establishment.*

WE lately observed, and with extreme regret, that the annual grant to this Institution met with some opposition in the House of Commons, arising, it would appear, out of the circumstance of some of the children of one honourable member having had small-pox after vaccination. The effect of such an opposition within the walls of that enlightened assembly was of course not unfavourable to the grant; but we fear the example of those who are supposed to have great means of obtaining information, and who instead of availing themselves of those means, legislate on the suggestion of their feelings, may be very detrimental. Sir Joseph Yorke's observations were very ably met by more than one member of the House; and the general feeling seemed to be; that the most unquestionable

instances of failure to protect in certain individuals, or in certain families, were in no degree proofs of the inutility of a measure by which so immense a number of individuals are preserved from small-pox infection. Of this the members of the medical profession, generally speaking, entertain no doubt; and it would be well if those who take upon themselves to speak on such an important subject in the great assembly of the nation would avail themselves of the advice of those whose studies have enabled them to form a correct opinion.

XIX. *Practice of Midwifery by Men.*

WE observe in the *advertisements* of a recent publication on this subject that it has made a *great sensation* in the upper classes. This is a sufficient assurance to us that it has made no sensation at all. In the profession it has excited, as far as our opportunities of observing extend, an universal feeling of disgust.

XX. *Sulphate of Quinine.*

THE quantity of sulphate of quinine made in the two manufactories of it in Paris during the year 1826, is stated to have been 90,000 ounces. Reckoning the average quantity taken by each patient to whom it is given to be about 36 grains, these ninety thousand ounces have been divided among one million four hundred and forty-four thousand individuals.—(*Rev. Méd.*)

XXI. *Researches into the Intimate Structure of the Intervertebral Ligaments.* By M. PAILLOUX.

BESIDES the fibrous ligaments themselves, the interstices which separate them and the pulpy and as it were oily matter that permits their reciprocal motion, which peculiarities many authors have mentioned, there is a cavity in the centre of the intervertebral cartilages which has never yet been described, although it is always to be found, and executes a very important part in the motions of the spine. It is sufficient, in order to discover it, to separate two vertebræ, leaving upon one of them all the intermediate substance, and to blow gently after pinching up the centre of the pulpy matter. It is possible also to demonstrate the existence of this cavity by making a vertical section of the bodies of some of the vertebræ and of the ligaments which unite them; but this plan of preparation is less favourable than the other, because the cavity described is divided, and the portions resulting from this strait division are little susceptible of separation. Prolonged maceration is also an excellent plan of exhibiting it; and it is generally more evident as the subject is younger.

In the fœtus, this cavity is very distinct, regular, and lubricated by an abundant limpid fluid. In the adult it forms an irregular hollow, the sides of which are generally smooth and polished in the parts that correspond to the bodies of the vertebræ, and present in

the remainder of their extent many appendices or prolongations, which sometimes form incomplete divisions; in other points, there are depressions which are principally directed towards the vertebral canal. The walls of this cavity are generally contiguous, and are lubricated by a viscous fluid, less abundant than in the infant.

In old age this cavity is diminished, and facilitates, by its obliteration, the ankylosis of the spine; its parietes are covered with an unctuous suety matter, often dry, and rendering the intervertebral ligaments rather brittle at this period of life.

Lastly, it is more manifest in the different classes of animals according to the nature of their movements, and the greater mobility that is required in the vertebral column. Accordingly, in reptiles, fish, birds, and a number of the mammifera, it is a true articular capsule, lubricated by a fluid more or less consistent, but always abundant. We may be convinced, also, that in the greater part it is covered with a true synovial capsule, as in serpents and birds.

The existence of a synovial membrane can only be inferred to exist in the human subject; it cannot be demonstrated.—(*Nouvelle Bibliothèque Médicale, Février 1827.*)

Clinical Report of the most prevalent Diseases during the preceding Month.

MAY has been, generally, a warm month, and much rain has fallen. In the beginning, north-east winds prevailed. Vegetation is very forward.

The principal complaints of this month have been rheumatism and catarrh. The former has principally attacked the muscles of the shoulder and upper arm, and in some instances lumbago has been very distressing. The examples of arthritis rheumatici have been few, and not very severe.

The principal characteristic of the catarrh has been its extreme obstinacy. Without any very prominent symptom, it has in many instances endured for a fortnight or three weeks with very little alteration. In some cases the eyes have been much inflamed.

Affections of the head have prevailed to a considerable extent, and several cases have come under our notice in which the head was disordered secondarily to some other disease, and in some instances with a fatal result. One case was rather remarkable. The patient, a young man about twenty-three years of age, had been attacked by pneumonia in a very severe form, and was largely bled. As this disorder left him, he became anasarctous and partially paralytic. There was severe pain in the right hypochondrium on pressure. Leeches were applied to this part, and diuretics were given largely, and with the effect of diminishing the disease. The paralysis has now nearly disappeared. The bowels of course were attended to at the same time.

Many of the asthmatic complaints have been much aggravated during this month, nor did medicine appear to have any material good effect till the north-east wind had disappeared. Scarlet fever and measles have both been common in particular districts; the former has been rather fatal.

LITERARY INTELLIGENCE.

A new edition of Dr. Gordon Smith's work on Forensic Medicine is in the press, and will be published immediately.

MONTHLY RECORD OF WORKS RECEIVED FOR REVIEW.

1. Hassel's Practical Observations on the General and Local Antiseptic Properties of the Chlorurets of the Oxides of Sodium and Calcium. Pp. 31. London.

2. Laws of Physiology, translated from the Italian of Il. Signor Dott. B. Majon, Professor Emeritus in the Royal University of Genoa, &c. Translated by G. R. Skene, M.R.C.L. Pp. 126. London.

3. An Account of the Apparatuses for the Treatment of Rheumatism and Diseases of the Skin; with plates. By William Wallace, M.R.I.A. Pp. 44. 1827.

4. Commentaries on some of the more Important Diseases of Females. In Three Parts. By Marshall Hall, M.D., F.R.S.E. Pp. 376. London, 1827.

Quarterly Report of Prices of SUBSTANCES employed in PHARMACY.

| | s. | d. | | s. | d. |
|-------------------------------------|--------|------|------------------------------|--------------|------|
| Acaciæ Gummi elect. | 3 | 4 | Coccus (Coccinella) | unc. | 2 6 |
| Acidum Citricum | 18 | 6 | Colocythidis Pulpa Turk. | lb. | 6 0 |
| Benzoinum | 3 | 0 | Copaiba | | 5 0 |
| Sulphuricum | P. lb. | 0 6 | Colchici Radix (sic.) | | 2 0 |
| Muriaticum | | 0 9 | Croci stigmata | unc. | 2 0 |
| Nitricum | | 2 6 | Cupri sulphas | | 1 0 |
| Aceticum Dilut. | cong. | 4 6 | Cuprum ammoniatum | | 8 0 |
| Tartaricum | | 4 6 | Cuspariæ Cortex | | 3 0 |
| Alcohol | M. lb. | 3 6 | Confectio aromatica | | 5 0 |
| Æther sulphuricus | | 7 0 | Aurantiorum | | 2 0 |
| rectificatus | | 9 0 | Cassie | lb. | 6 0 |
| Aloes spicata extractum | | 10 6 | Opil. | | 6 0 |
| vulgaris extractum | | 8 0 | Piperis Nigri | lb. | 3 0 |
| Althææ Radix | | 1 2 | Rosæ caninae | | 1 8 |
| Alumen | | 0 6 | Rosæ gallicæ | | 2 3 |
| Ammoniæ Murias | | 1 8 | Rutæ | unc. | 3 6 |
| Subcarbonas | | 2 0 | Scammoniæ | unc. | 2 6 |
| Amygdalæ dulces | | 3 6 | Sennæ | | 3 3 |
| Ammoniacum (Gutt.) | | 7 0 | Emplastrum Ammon. c. Hydrar. | lb. | 6 6 |
| (Lump.) | | 3 6 | Cantharidis | | 6 6 |
| Anthemidis Flores | | 3 0 | Hydrargyri | | 3 3 |
| Antimonii oxydum Ver. | | 6 3 | Opil. | | 3 6 |
| sulphuretum præp. | | 3 6 | Resinæ | | 1 8 |
| sulphuretum præc. | unc. | 0 6 | Saponis | | 1 8 |
| Antimonium Tartarizatum | | 3 4 | Extractum Aconiti | unc. | 3 10 |
| Arsenicum Alb. Sublim. | | 2 6 | Anthemidis | lb. | 8 0 |
| Asafoetidæ Gummi-resina | | 4 0 | Belladonnæ | unc. | 1 6 |
| Aurantii Cortex | 9 | 4 | Cinchonæ | | 3 3 |
| Argentii Nitras | unc. | 5 9 | Cinchonæ resinosum | | 4 6 |
| Balsamum Peruvianum | lb. | 15 3 | Colocythidis | | 4 6 |
| Tolutanum | | 50 0 | Colocythidis comp. | | 1 9 |
| Benzoinum elect. | | 8 6 | Conii | | 6 0 |
| Bismuthi Subnitras | unc. | 1 0 | Elatieri | | 25 3 |
| Calamina præparata | | 0 6 | Gentianæ | | 3 4 |
| Calcis Murias | unc. | 0 3 | Glycyrrhizæ | lb. | 7 3 |
| Muriatis solutio | lb. | 1 3 | Hæmatoxyli | unc. | 3 5 |
| Calumbæ | lb. | 5 6 | Humuli | | 1 6 |
| Cambogiæ | | 7 6 | Hyoscyami | | 1 3 |
| Camphora | | 4 9 | Jalapæ | Is. 6d. Res. | 3 3 |
| Cannellæ Cortex elect. | | 2 6 | Lactucæ Sativæ | unc. | 1 3 |
| Cantharis | lb. | 12 3 | Virosæ | unc. | 1 3 |
| Cardamomi Semina | lb. | 16 0 | Opil. | | 4 6 |
| Cascarillæ Cortex elect. | | 1 6 | Papaveris | | 7 0 |
| Castoreum | unc. | 3 3 | Rhei | | 2 3 |
| Castor Russ. | oz. | 15 3 | Sarsaparillæ | | 2 3 |
| Catechu Extractum | lb. | 1 9 | Stramonii Sem. | unc. | 8 3 |
| Cetaceum | | 3 0 | Taraxaci | | 3 6 |
| Cera alba | | 3 4 | Ferri subcarbonas præcip. | lb. | 3 4 |
| flava | | 3 3 | sulphas | | 1 0 |
| Cinchonæ cordifoliæ Cortex (yellow) | | 10 6 | Ferrum ammoniatum | | 3 3 |
| lancifoliæ Cortex (quilled) | | 4 0 | tartarizatum | | 3 9 |
| oblongifoliæ Cortex (red) | | 9 0 | Galbani Gummi-resina | | 7 6 |
| Cinnamomi Cortex | | 14 3 | Gentianæ Radix elect. | | 1 8 |

Quarterly Report of Prices of Substances in Pharmacy. 567

| | s. | d. | | s. | d. |
|---------------------------|-------------|------|------------------------------|--------|-----|
| Guaiaci resina | 7 | 6 | Potasse Subcarbonas | 1 | 4 |
| Hydrargyrum purificatum | 4 | 3 | — Sulphas | 1 | 6 |
| — precipitatum album | 8 | 3 | — Sulphuretum | 3 | 9 |
| — cum creta | 3 | 3 | — Supersulphas | 2 | 4 |
| Hydrargyri Oxymurias | unc. | 0 9 | — Tartras | 2 | 4 |
| — Submurias | P. lb. | 6 6 | — Supertartras | 1 | 3 |
| — Nitrico-Oxydum | 0 | 6 | Pilule Hydrargyri | unc. | 0 4 |
| — Oxydum Cinereum | 1 | 8 | Pulvis Antimonialis | unc. | 0 4 |
| — Oxydum rubrum | 4 | 0 | — Cinnamomi compos. | unc. | 1 6 |
| — Sulphuretum nigrum | 0 | 6 | — Contrayerva comp. | unc. | 0 4 |
| — — rubrum | 0 | 4 | — Ipecacuanha compos. | unc. | 0 9 |
| Hellebori nigri Radix | lb. | 2 6 | — Scammonie compos. | unc. | 3 8 |
| Ipecacuanha Radix | 16 | 6 | — Tragacanthæ comp. | 0 | 8 |
| — Pulvis | 19 | 3 | Resina Flava | lb. | 0 6 |
| Jalape Radix | 6 | 3 | Rhei Radix (Russia) | 28 | 4 |
| — Pulvis | 7 | 3 | — (East India) opt. pulv. | 13 | 6 |
| Kino | 7 | 3 | Rose petals | 10 | 9 |
| Liquor Plumbi subacetatis | P. lb. | 0 8 | Sapo (Spanish) | 2 | 6 |
| — Ammonie | 1 0 2 | 6 | Sarsaparilla Radix (Jam.) | 6 | 3 |
| — Arsenicalls | 1 | 3 | Scammonie Gummi-Resina | unc. | 4 0 |
| — Potasse | 1 | 0 | — Scilla Radix siccata | lb. | 1 6 |
| Linimentum Æruginis | lb. | 3 0 | Senegæ Radix | 3 | 6 |
| — Camphoræ comp. | 5 | 6 | — Senna Folia | 5 0 | 6 6 |
| — Saponis comp. | 4 | 3 | Serpentaria Radix | 4 | 9 |
| Lichen | 2 | 6 | — Simarouba Cortex | 3 | 6 |
| Magnesia | 7 | 3 | Sode subboras | 2 | 6 |
| Magnesie Subcarbonas | 2 6 | 3 3 | — Sulphas | 0 | 3 |
| — Sulphas | 0 | 4 | — Carbonas | 3 | 9 |
| Manna | 7 | 0 | — Subcarbonas | 1 | 0 |
| — communis | 4 | 0 | — exsiccata | 3 | 3 |
| Moschus pod. (32s.) | in gr. unc. | 46 3 | Soda tartarisata | 2 | 3 |
| Mastiche | lb. | 8 3 | Spongia usta | unc. | 1 6 |
| Myristice Nuclei | 14 | 6 | Spiritus Ammonie | M. lb. | 4 6 |
| — Myrrha | 7 | 3 | — — aromaticus | 4 | 6 |
| — Oilbanum | 3 | 3 | — — fetidus | 4 | 3 |
| Opopanax gummi resina | 20 | 3 | — — succinatus | 4 | 3 |
| Opium (Turkey) | 30 | 0 | — Cinnamomi | 3 | 6 |
| Oleum Æthereum | os. | 2 3 | — Colchici Ammon. | unc. | 0 9 |
| — Amygdalarum | lb. | 3 6 | — Lavandule | lb. | 6 3 |
| — Anisi | unc. | 1 8 | — Myristice | 3 | 3 |
| — Anthemidis | 6 | 3 | — Pimentæ | 4 | 3 |
| — Cassie | 3 | 9 | — Rosmarini | 4 | 3 |
| — Caryophylli | 4 | 6 | — Ætheris Aromaticus | 9 | 3 |
| — Cajuputi | 3 | 0 | — — Nitrici | 3 6 | 5 3 |
| — Carui | 1 | 6 | — Sulphurici | 6 | 3 |
| — Juniperi Ang. | 6 | 3 | — Compositus | 6 | 3 |
| — Lavandule | 2 | 6 | — Vini rectificatus | 26 | 0 |
| — Lini | cong. | 4 3 | Syrupus Papaveris | lb. | 1 3 |
| — Menthe piperitæ | unc. | 3 0 | — Sarsaparilla | lb. | 9 3 |
| — Menthe viridis Ang. | 4 | 6 | — Tolutanus | lb. | 2 9 |
| — Origanii | unc. | 1 3 | Sulphur Sublimatum | 0 | 6 |
| — Pimentæ | unc. | 5 6 | — Lotum | 1 | 6 |
| — Pulegii | unc. | 4 6 | — Precipitatum | 1 | 5 |
| — Ricini optim. | 3 | 6 | Tamarindi Pulpa opt. | 2 | 6 |
| — Rosmarini | unc. | 3 9 | Terebinthina Vulgaris | 0 16 | 6 6 |
| — Succini | 3 | 6 | — — Canadensis | 6 | 6 |
| — Sulphuratum | P. lb. | 1 2 | — — Chia | 10 | 3 |
| — Terebinthina | 1 | 4 | Tinct. Ferri muriatis | 4 | 3 |
| — — rectificatum | 2 | 3 | — Tragacantha Gummi | 8 | 3 |
| — Olive Oleum | P. lb. | 2 0 | — Valeriane Radix | 1 | 3 |
| — — secundum | 1 | 6 | — Veratri Radix | 1 | 10 |
| Papaveris Capsule | (per 100) | 2 9 | Vinum Colchici | 4 | 3 |
| Pix Abietina | lb. | 1 3 | — Ipecacuanha | 4 | 0 |
| Plumbi Acetas | 1 | 6 | — — Opil | 8 | 0 |
| — Subcarbonas | lb. | 3 8 | Unguentum Hydrargyri fortius | 3 | 0 |
| — Oxydum semi-vitreum | 3 | 8 | — — Nitratu | 5 | 8 |
| Potassa Fusa | unc. | 3 6 | — — Nitrico-oxydi. | 4 | 3 |
| — cum Calce | 3 | 6 | Uve Ursi Folia | 3 | 4 |
| Potasse Nitras | 0 6 | 1 3 | Zinci Oxydum | 5 | 3 |
| — Acetas | 7 | 3 | — Sulphas purif. | 1 | 3 |
| — Carbonas | 2 | 6 | Zingiberis Radix opt. | 4 | 3 |

NEW REMEDIES.

| | s. | d. | | s. | d. |
|--------------------|---------|---------|--|-------------|---------|
| Brucine | dr. | 28 3 | Morphine Acetate Liquor | os. 18s. | dr. 2 3 |
| Emetine du Codex | dr. | 25 3 | Hydrocyan. Acid (Scheele's), twice the strength of Vauquelin's | os. 3s. 8d. | dr. 0 6 |
| Hydriod. Potass. | os. 5s. | dr. 1 0 | Quinine Sulphate | os. 34. | dr. 4 6 |
| Iodine | os. 5s. | dr. 1 0 | Strychnine | dr. | 26 3 |
| — Tincture | os. | 0 10 | Veratrine | dr. | 30 3 |
| Morphine Crystall. | dr. | 21 3 | | | |
| — Acetate | dr. | 20 3 | | | |

Furnished by Messrs. G. and J. WAUGH, Chemists and Druggists, Regent Street.

THE METEOROLOGICAL JOURNAL,

From the 26th of APRIL, 1827, to the 19th of MAY, 1827.

By Messrs. HARRIS and Co.

Mathematical Instrument Makers, 50 High Holborn.

| April. | Moons. | Rain Gauge. | Therm. | | | Barom. | | De Luc's Hygrom. | | Winds. | | Atmo. Variation. | | |
|--------|--------|-------------|--------|------|------|--------|---------|------------------|---------|--------|---------|------------------|--------|---------|
| | | | 9 A.M. | Max. | Min. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 10 P.M. | 9 A.M. | 2 P.M. | 10 P.M. |
| 20 | | | 44 | 50 | 44 | 29 | 53 | 29 | 47 | 96 | 90 | ENE | E | Cloudy |
| 21 | | | 45 | 49 | 41 | 29 | 39 | 29 | 49 | 98 | 98 | ENE | ENE | Cloudy |
| 22 | | | 43 | 45 | 37 | 29 | 56 | 29 | 66 | 88 | 82 | NE | NNE | Cloudy |
| 23 | | | 42 | 45 | 36 | 29 | 61 | 29 | 53 | 77 | 81 | N | S | |
| 24 | | | 45 | 47 | 34 | 29 | 40 | 29 | 52 | 87 | 80 | SSW | SW | |
| 25 | | | 47 | 50 | 36 | 29 | 63 | 29 | 84 | 74 | 75 | SW v. | SW | Fair |
| 26 | ● | | 44 | 63 | 38 | 30 | 00 | 30 | 15 | 77 | 70 | W | SSW | |
| 27 | | | 53 | 57 | 42 | 30 | 18 | 30 | 10 | 68 | 80 | SSE v. | E | |
| 28 | | | 54 | 64 | 46 | 29 | 98 | 29 | 91 | 85 | 80 | E | E | Fine |
| 29 | | | 58 | 71 | 52 | 29 | 90 | 29 | 93 | 81 | 76 | E | E | |
| 30 | | | 61 | 74 | 57 | 29 | 93 | 29 | 91 | 79 | 72 | WSW | W | |
| 1 | | | 63 | 72 | 50 | 29 | 91 | 29 | 91 | 80 | 87 | W | S v. | |
| 2 | | | 53 | 63 | 53 | 29 | 90 | 29 | 84 | 93 | 96 | ESE | ESE | Cloudy |
| 3 | | | 60 | 68 | 53 | 29 | 81 | 29 | 88 | 82 | 76 | W | W | Fair |
| 4 | | | 58 | 66 | 53 | 29 | 86 | 29 | 67 | 81 | 83 | WSW | SW | Cloudy |
| 5 |) | 65 | 58 | 58 | 52 | 29 | 53 | 29 | 37 | 90 | 95 | SW | SSW | Rain |
| 6 | | | 53 | 56 | 44 | 29 | 21 | 29 | 34 | 95 | 92 | SSW | NNW | Rain |
| 7 | | | 49 | 55 | 37 | 29 | 55 | 29 | 57 | 72 | 80 | E | ENE | Cloudy |
| 8 | | | 46 | 50 | 39 | 29 | 72 | 29 | 76 | 78 | 75 | NE | E | Cloudy |
| 9 | | | 45 | 52 | 42 | 29 | 70 | 29 | 67 | 80 | 80 | ENE | ENE | |
| 10 | | | 53 | 56 | 43 | 29 | 65 | 29 | 64 | 76 | 78 | ENE | ESE | |
| 11 | ○ | | 52 | 59 | 42 | 29 | 66 | 29 | 83 | 78 | 81 | ENE | E | Fair |
| 12 | | | 50 | 57 | 40 | 29 | 96 | 29 | 97 | 75 | 81 | ENE | ENE | Fair |
| 13 | | | 50 | 58 | 45 | 29 | 84 | 29 | 75 | 79 | 77 | NE | NNE | |
| 14 | | 10 | 54 | 54 | 46 | 29 | 70 | 29 | 66 | 82 | 91 | NE | NW | Cloudy |
| 15 | | | 50 | 57 | 46 | 29 | 64 | 29 | 61 | 88 | 85 | WSW | SE | Fair |
| 16 | | 17 | 60 | 64 | 48 | 29 | 44 | 29 | 31 | 82 | 92 | E | SE | Fair |
| 17 | (| 35 | 58 | 66 | 53 | 29 | 45 | 29 | 49 | 78 | 92 | SSE | E | Rain |
| 18 | | | 55 | 66 | 55 | 29 | 52 | 29 | 67 | 87 | 78 | SW | W | Fair |
| 19 | | | 65 | 67 | 55 | 29 | 80 | 29 | 90 | 75 | 71 | NW | W | Fine |

NOTICES TO CORRESPONDENTS.

The Indexes to the two preceding Volumes will certainly be given in our next Number.

Literary Notices, &c. cannot be inserted in the body of the work, unless with a very few exceptions, which will rest with the Editors.

. Communications, and Works for Review, are requested to be addressed (post paid) to the Editors, to the care of Messrs. T. and G. UNDERWOOD, 62 Fleet Street.

INDEX

TO

VOLUME IV.—NEW SERIES.

| | | | |
|---|-----|---|-----|
| ABEL, Dr., death of | 469 | Calmeil, on Paralysis in Lunatics, reviewed. | 1 |
| Absorption, experiments on | 467 | Calcium, chloruret of the oxide of | 538 |
| Acetate of ammonia, employment of | 173 | Calculi in the vesicæ seminales. | 458 |
| Acid, notice of a peculiar | 263 | Cancer, treatment of, by compression | 456 |
| Accident, extraordinary | 275 | Cancerous affection of the stomach | 428 |
| Ainslie's Materia Indica, reviewed | 41 | Carmichael's Introductory Lecture, reviewed | 411 |
| Alcock, on Disinfecting Chlorurets, reviewed | 219 | Casuistry, medical | 553 |
| Aneurism, spontaneous cure of | 275 | Cephalo-rachidien fluid | 353 |
| — case of | 95 | Cerebral inflammation, treatment of | 456 |
| Anus, artificial | 58 | Children, comparative number of male and female | 433 |
| Arsenic, detection of | 82 | Chlorurets, on Disinfecting, reviewed | 219 |
| Articulation, loss of, from affection of the stomach | 541 | Clark, on Method of Clinical Medicine at Edinburgh, reviewed | 228 |
| Asphyxia, case of | 468 | Cloquet, Anatomie des Vers Intestinaux, reviewed | 97 |
| — Segalas on | 185 | Concretions, in mesentery of a bull | 275 |
| Asthma, new method of treating | 468 | — in plexus choroides | 428 |
| Astragalus, removal of | 430 | Cooper's Dictionary of Surgery, French translation | 90 |
| | | Crystalline lens, experiments on reproduction of | 458 |
| Baths, analysis of Moira | 274 | | |
| Bark, marks of real king's | 366 | Death, sudden, review | 25 |
| Bayle, on Mental Disorders, reviewed | 1 | — from bite of a viper..... | 466 |
| Belladonna in intermittent fever | 462 | — from bite of a cock | 466 |
| Bezoar, human | 260 | — sudden, case of | 68 |
| Birmingham, inquests at | 26 | | |
| Brera, on Verminous Diseases, reviewed | 97 | | |
| Brain and nerves, state of, in monstrosities | 262 | | |
| | | | |
| Cafein, mode of preparing | 80 | | |

- Depilation, case of spontaneous 367
 Diphtheritis, alum used in 350
 Diseases of tailors, &c., at Ham-
 burgh 361
 Disease, account of epidemic 365
 Divisions of the profession 440
 Drowning, phenomena of 60
 — recovery from 63
 Duodenum, rupture of 373
 Dysmenorrhœa, remarks on 370
- Ear, diseases of the 555
 Education, Improvement of
 Medical, reviewed 229
 Elephantiasis, pathological ana-
 tomy of 371
 Epilepsy, *Portal* on, reviewed 473
 — musk in 375
 Epistaxis, cases of 457, 556
 Experiments on substances dis-
 coverable in the urine 70
 — on effects of ergoted rye 72
- Fecundity in different parts of
 Europe 258
 Females, *Dr. Hall* on, Diseases
 of, reviewed 518
 Fever, yellow, remarks on 464
 Fistula lachrymalis 66
 Fœtus, portions of, found in the
 scrotum of a male infant 69
 Fungoid tumour, removed from
 the breast 69
- Gall-bladder wanting 69
 — inflammation of 350
 Gases, confinement of dry, over
 mercury 80
Gendrin, on Anatomical His-
 tory of Inflammations, re-
 viewed 160, 508
 Glasgow, regulations of Uni-
 versity of 91
 Good, death of *Dr. John Mason* 189
- Hardening of the skin in in-
 fants, memoir by *M. Billard* 46
 Hæmoptysis, nitrate of potash
 in 177
 Hermaphrodite, case of sup-
 posed 78
 Hernia, intestinal suture in a
 case of 174
Hooper's Morbid Anatomy of
 the Brain, reviewed 37
 Homœopathia, remarks on 451
 Humerus, partial removal of 365
 Hydrocyanic acid, employment
 of, in chronic affections of the
 lungs 176
 Hydrophobia, swellings in the
 orifices of the ducts of Whar-
 ton, in 69
- Incubation, artificial 189
 Indigestion, on Protracted, re-
 viewed 207
 Inflammation, Anatomical His-
 tory of, by *A. M. Gendria*,
 reviewed 160, 508
 Insane, propriety of religious
 instruction of the 51
 Intestinal suture 175
 Iodine, found in the mineral
 spring near Leith 81
 Ioduret of mercury, application
 of deuto-ioduret 171
 Italy, remarks on medical edu-
 cation of 183
- Jenner, Dr., Baron's* Life of,
 reviewed 378
 Jejunum, obstruction of, by bi-
 liary calculi 542
 Joint, treatment of artificial 364
- Larynx and Trachea, Surgical
 Pathology of, by *Mr. Porter*,
 reviewed 329
Levison, on Teeth and Gums,
 reviewed 307
 Ligature of silk-worm gut 457
 Ligaments, intervertebral, in-
 timate structure of 569
 Lightning, peculiar effects of 586
 Liver, rupture of the 429
London, on Extraction of Ca-
 taract, reviewed 49
Louis, Mémoire sur la Ténia,
 &c., reviewed 97
 — Anatomical and Patho-
 logical Researches, on soften-
 ing of the Stomach, &c., re-
 viewed 250
 Lungs, gangrene of 65, 541
 Lunatic asylum at Aversa, note
 of 85
 Luxation, *Dupuytren* on conge-
 nital 169
 Lymphatics and veins, on the
 supposed communication of 360
- Madeira, on the climate of, in
 phthisis 434
 Mania from sobriety, case of 467
 Madar, medical uses of 78

- Medical intelligence, prizes of the Academies of France 90
 — and surgical proceedings . 186
 Medicine, with relation to princes 357
 Medulla spinalis, case of inflammation of 548
 Memphis, animal and vegetable substances found at 83
 Mental Disorders, *reviews* 1, 282
 Menstruation, difficult case of . 173
 Midwifery, practice of, by men . 569
 Mollities ossium, case of 552
 Monstrosity observed in China . 79
 Mortality, bills of, 1826 265
 Moxa, *Wallace* on, *reviewed* ... 145
 — employment of, case of . 191
 Mustard-seed, white, remarks on 445
- Nails, diseases of 175
 Nerves, *Bell*, on the Natural System of, *reviewed*..... 402
 — cicatrization of..... 456
Nind, on phagedæna of the genitals 339
 Nose, artificial 373
- Œdema of children, *Bolland* on 351
 Esophagus and stomach, perforation of 82
 — communicating with trachæa 455
 Omentum, inflammation of..... 427
 Opium, effects of different preparations of 173
 Ophthalmia, use of polygala senega in 56
- Paraplegia, facts relating to, by *Dr. Baillie*..... 535
 Paralysis, cases of 277, 565
 Parisian schools, on clinical instruction in 542
 Pennsylvania, regulations of University of..... 93
 Picrotoxine, new substance discovered in preparing... 480
Pinel, *M.*, death of 9
 Phagedæna of the genitals, *Nind* on 339
Philip, on Protracted Cases of Indigestion, *reviewed* 207
 Phlebitis, treated by compression 348
 Phthisis Pulmonalis, *Andral* on 66
 — use of uva ursi in 74
Physick's operation for artificial anus 58
 Placenta, new mode of detaching the 374
- Population, increase of 465
Porter, on Surgical Diseases of the Larynx and Trachea, *reviewed*..... 329
 Preparations, directions for making, in hot climates..... 431
Prichard, on Physical History of Man, *reviewed* 112
 Prisons, mortality of 264
 Prize questions 557
 Pulmonary apoplexy, case of ... 189
 Pulse, *Dr. Julius Rucco* on the 559
- Quinine, sulphate of 564
- Rasori*, practice of, in intermittents 463
 Reports, clinical, 94, 190, 277, 374, 469, 565
 Rheumatism, treatment of articular 460
 Rupture of duodenum 373
 Rye, effects of ergoted ... 72
- Salivation, cured by calomel ... 457
 Savannah, Autumnal Fevers of, by *Daniel*, *reviewed* 193
Segalas on asphyxia 185
 Sick-poor, on the state of the, 177, 568
- Skin, Diseases of, *reviewed* 313
 Small-pox, experiments upon ... 425
 Sodium, beneficial effects of the chlorurets of the oxide of, 539, 553
 Speculum vesicæ 458
 Statistics, medical..... 555
 Stomach, hypertrophy of the ... 554
 Stramonium, case of a child who took 422
 Studies, medical remarks on ... 557
 Suicides in Prussia 464
 Sulphur, fluidity of, at common temperatures 81
 Sulphuric acid, case of poisoning by 556
- Tartar of the teeth, remarks on, by *Dennis* 363
Thomson, *Dr. John*, on the preparatory education of candidates for the degree of M.D. . 229
Thomson, *Dr. A. T.*, Thoughts on Medical Education, *reviewed*..... 229
 Transfusion, successful case of . 266
 Tubercles, formation of 68
 Tumour of the abdomen, encysted 349

| | | | |
|--|----------|--|-----|
| Ulcer of the nose | 485 | Vaccine Establishment, opposi- | |
| Umbilical chord, on separation | | tion in parliament to the an- | |
| of, by <i>Billard</i> | 290 | nual grant to..... | 563 |
| University, London | 229, 561 | — Society of Philadelphia ... | 425 |
| Urine, incontinence of..... | 68 | <i>Vaccinia</i> , <i>Daglish's</i> report on ... | 447 |
| Urethra, artificial | 426 | Variolæ vaccinae in the horse ... | 426 |
| Uterus, amputation of neck of... | 374 | Vena cava, rupture of abdo- | |
| — disease of the | 470 | menal | 455 |
| Vaccination, <i>North</i> and <i>Gregory</i> | | Verminous Diseases, <i>Brera</i> , | |
| on | 270 | <i>Louis</i> , and <i>Cloquet</i> , on, re- | |
| — of animals | 423 | viewed..... | 97 |
| — sharp or blunt lancets in . | 537 | Vesical petrification, case of..... | 428 |
| — permanent evidences of ... | 537 | Vision, theory of | 553 |
| Vaccine and varioloid matter, | | <i>Walker</i> , memoir of <i>Dr. W.</i> , of | |
| identity of | 555 | Richmond | 442 |
| — Establishment, report of | | <i>Wallace</i> , on Moxa, reviewed ... | 145 |
| National.. | 451 | | |

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